Paul Schulwitz

Access DB# 112156

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Rebecca Cook Examiner #: 69826 Date: 1/14/04
Art Unit: 1614 Phone Number 30 Serial Number: 09/928911
Mail Box and Bldg/Room Location: CM1 2D01 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): Mark Zamoyski

Earliest Priority Filing Date: 8/11/98

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please provide structures for tricothecene & search them for ~~a~~ method of claims ~~1-22~~ 9 & 10

Thank you
Rebecca Cook

Rich Search Approved
TR Page
SPE, AU 1615

STAFF USE ONLY

Searcher: JARRELL 10/28/04
Searcher Phone #:
Searcher Location:
Date Searcher Picked Up:
Date Completed: 1/15/04
Searcher Prep & Review Time: 64
Clerical Prep Time:
Online Time: 114

Type of Search

NA Sequence (#)
AA Sequence (#)
Structure (#)
Bibliographic
Litigation
Fulltext
Patent Family
Other

Vendors and cost where applicable

STN 449
Dialog
Questel/Orbit
Dr Links
Lexis/Nexis
Sequence Systems
WWW/Internet
Other (specify)

```
=> b reg
FILE 'REGISTRY' ENTERED AT 10:58:37 ON 15 JAN 2004
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   13 JAN 2004  HIGHEST RN 637299-19-5
DICTIONARY FILE UPDATES:  13 JAN 2004  HIGHEST RN 637299-19-5

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

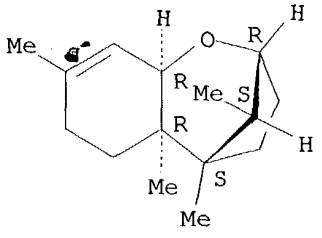
Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d que l9
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)


=> d ide l9 tot

L9   ANSWER 1 OF 2  REGISTRY  COPYRIGHT 2004 ACS on STN
RN   51724-48-2  REGISTRY
CN   Trichothec-9-ene (9CI)  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   2,5-Methano-1-benzoxepin, trichothec-9-ene deriv.
OTHER NAMES:
CN   Trichothecene
FS   STEREOSEARCH
DR   66187-00-6
MF   C15 H24 O
LC   STN Files:   AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN,
       CIN, EMBASE, IPA, PROMT, TOXCENTER, USPAT2, USPATFULL

Absolute stereochemistry.
```

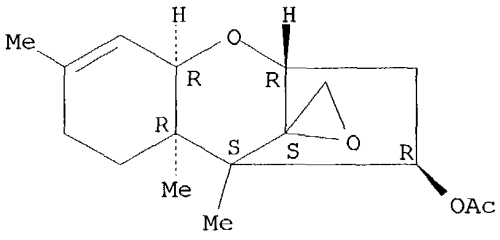


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

168 REFERENCES IN FILE CA (1907 TO DATE)
65 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
169 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L9 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN 4682-50-2 REGISTRY
CN Trichothec-9-en-4-ol, 12,13-epoxy-, acetate, (4β)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Spiro[2,5-methano-1-benzoxepin-10,2'-oxirane], trichothec-9-en-4-ol deriv.
CN **Trichodermin (7CI)**
CN Trichothec-9-en-4β-ol, 12,13-epoxy-, acetate (8CI)
OTHER NAMES:
CN NSC 267033 This is a type of trichothecene according to Medline
CN NSC 73846
CN WG 696
FS STEREOSEARCH
DR 11010-11-0, 16821-99-1
MF C17 H24 O4
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CSCHEM, DDFU, DRUGU, EMBASE, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, RTECS*, SPECINFO, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

128 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
129 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CAOLD (PRIOR TO 1967)

=> => b cap
FILE 'CAPLUS' ENTERED AT 13:38:24 ON 15 JAN 2004
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FILE COVERS 1907 - 15 Jan 2004 VOL 140 ISS 3
FILE LAST UPDATED: 14 Jan 2004 (20040114/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

```
=> d que l39
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L10          293 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9
L12        22658 SEA FILE=CAPLUS ABB=ON  PLU=ON  LUNG, NEOPLASM/CT
L13          235 SEA FILE=CAPLUS ABB=ON  PLU=ON  LUNGS, NEOPLASMS/CT
L15       125489 SEA FILE=CAPLUS ABB=ON  PLU=ON  LUNG#/OBI OR PULMON?/OBI
L28       596051 SEA FILE=CAPLUS ABB=ON  PLU=ON  CANCER?/OBI OR MALIGN?/OBI OR
                 NEOPLAS?/OBI OR TUMOR?/OBI OR TUMOUR?/OBI OR CARCINO?/OBI OR
                 ADENO?/OBI OR SARCOMA?/OBI
L32         2241 SEA FILE=CAPLUS ABB=ON  PLU=ON  TRICHOTHEC!NE#/OBI OR TRICHODER
                 MIN#/OBI OR T-2/OBI (W) TOXIN/OBI OR (NSC/OBI (W) 267033/OBI
                 OR 73846/OBI) OR WG/OBI (W) 696/OBI
L33            4 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L10 OR L32) AND L28 AND L15
L38            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L10 OR L32) AND (L12 OR L13)
L39            4 SEA FILE=CAPLUS ABB=ON  PLU=ON  L33 OR L38
```

Combo of ~~Lung(LFT), CT~~ Lung Cancer (LFT, CT) and (~~Structures~~ Compounds RN & FT)

```
=> b uspatfull
FILE 'USPATFULL' ENTERED AT 13:38:41 ON 15 JAN 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 15 Jan 2004 (20040115/PD)
FILE LAST UPDATED: 15 Jan 2004 (20040115/ED)
HIGHEST GRANTED PATENT NUMBER: US6678893
HIGHEST APPLICATION PUBLICATION NUMBER: US2004010831
CA INDEXING IS CURRENT THROUGH 15 Jan 2004 (20040115/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Jan 2004 (20040115/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2003
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2003

>>> USPAT2 is now available. USPATFULL contains full text of the      <<<
>>> original, i.e., the earliest published granted patents or        <<<
>>> applications. USPAT2 contains full text of the latest US         <<<
>>> publications, starting in 2001, for the inventions covered in    <<<
>>> USPATFULL. A USPATFULL record contains not only the original     <<<
>>> published document but also a list of any subsequent             <<<
>>> publications. The publication number, patent kind code, and      <<<
>>> publication date for all the US publications for an invention     <<<
>>> are displayed in the PI (Patent Information) field of USPATFULL  <<<
```

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>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                        <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together       <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to         <<<
>>>  enter this cluster.                                              <<<
>>>                                                                   <<<
>>>  Use USPATALL when searching terms such as patent assignees,      <<<
>>>  classifications, or claims, that may potentially change from     <<<
>>>  the earliest to the latest publication.                          <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d que l37
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L20           19 SEA FILE=USPATFULL ABB=ON  PLU=ON  L9
L22         3559 SEA FILE=USPATFULL ABB=ON  PLU=ON  LUNG, NEOPLASM/CT
L24        45842 SEA FILE=USPATFULL ABB=ON  PLU=ON  (CANCER? OR MALIGN? OR
                 NEOPLAS? OR TUMOR? OR TUMOUR? OR CARCINO? OR ADENO? OR
                 SARCOMA?)/TI,IT,AB,CLM
L25        15008 SEA FILE=USPATFULL ABB=ON  PLU=ON  (LUNG# OR PULMON?)/TI,IT,AB,
                 CLM
L34           78 SEA FILE=USPATFULL ABB=ON  PLU=ON  (TRICHOTHEC!NE# OR TRICHODER
                 MIN# OR T-2 (W) TOXIN OR (NSC (W) 267033 OR 73846) OR WG (W)
                 696)/TI,IT,AB,CLM
L35            2 SEA FILE=USPATFULL ABB=ON  PLU=ON  (L34 OR L20) AND L24 AND
                 L25
L36            0 SEA FILE=USPATFULL ABB=ON  PLU=ON  (L34 OR L20) AND L22
L37            2 SEA FILE=USPATFULL ABB=ON  PLU=ON  (L35 OR L36)
```

COMBO OF COMPOUNDS (FT, RN) AND LUNG CANCER

```
=> b medline cancerlit
FILE 'MEDLINE' ENTERED AT 13:38:58 ON 15 JAN 2004

FILE 'CANCERLIT' ENTERED AT 13:38:58 ON 15 JAN 2004

=> d que l46
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L40           52 SEA FILE=MEDLINE ABB=ON  PLU=ON  L9
L41         1956 SEA FILE=MEDLINE ABB=ON  PLU=ON  TRICHOTHEC!NE# OR TRICHODERMIN
                 # OR T-2 (W) TOXIN OR (NSC (W) 267033 OR 73846) OR WG (W) 696
L42         1724 SEA FILE=MEDLINE ABB=ON  PLU=ON  TRICHOTHECENES+NT/CT
L43        91408 SEA FILE=MEDLINE ABB=ON  PLU=ON  LUNG NEOPLASMS+NT/CT
L44            1 SEA FILE=MEDLINE ABB=ON  PLU=ON  (L40 OR L41 OR L42) AND L43
L45            1 SEA FILE=CANCERLIT ABB=ON  PLU=ON  (L40 OR L41 OR L42) AND L43

L46            1 SEA FILE=CANCERLIT ABB=ON  PLU=ON  (L44 OR L45)
```

COMBO OF COMPOUNDS (FT, RN) AND LUNG CANCER

```
=> b embase
FILE 'EMBASE' ENTERED AT 13:39:13 ON 15 JAN 2004
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```

FILE COVERS 1974 TO 5 Jan 2004 (20040105/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

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```
=> d que l69
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L62          432 SEA FILE=EMBASE ABB=ON  PLU=ON  L9
L63       128236 SEA FILE=EMBASE ABB=ON  PLU=ON  (CANCER? OR MALIGN? OR
                 NEOPLAS? OR TUMOR? OR TUMOUR? OR CARCINO? OR ADENO? OR
                 SARCOMA?) AND (LUNG# OR PULMON?)
L64         1415 SEA FILE=EMBASE ABB=ON  PLU=ON  TRICHOTHEC!NE# OR T-2 (W)
                 TOXIN OR TRICHODERMIN# OR (NSC (W) 267033 OR 73846) OR WG (W)
                 696
L65            4 SEA FILE=EMBASE ABB=ON  PLU=ON  (L62 OR L64) AND L63
L66         5592 SEA FILE=EMBASE ABB=ON  PLU=ON  LUNG TUMOR/CT
L67        71146 SEA FILE=EMBASE ABB=ON  PLU=ON  LUNG CANCER+NT/CT
L68            1 SEA FILE=EMBASE ABB=ON  PLU=ON  (L66 OR L67) AND (L62 OR L64)
L69            4 SEA FILE=EMBASE ABB=ON  PLU=ON  L65 OR L68
```

Combo of Compounds (FT, RN) and Lung Cancer (FT, CT)

```
=> b drugu biosis
FILE 'DRUGU' ENTERED AT 13:39:30 ON 15 JAN 2004
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FILE 'BIOSIS' ENTERED AT 13:39:30 ON 15 JAN 2004
COPYRIGHT (C) 2004 BIOLOGICAL ABSTRACTS INC.(R)

=> d que l73
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L70         2584 SEA TRICHOTHEC!NE# OR T-2 (W) TOXIN OR TRICHODERMIN# OR (NSC
                 (W) 267033 OR 73846) OR WG (W) 696
L71          893 SEA L9
L72       178425 SEA (CANCER? OR MALIGN? OR NEOPLAS? OR TUMOR? OR TUMOUR? OR
                 CARCINO? OR ADENO? OR SARCOMA?) AND (LUNG# OR PULMON?)
L73            8 SEA (L70 OR L71) AND L72
```

Combo of Compounds (RN, FT) AND Lung Cancer (FT)

```
=> b wpids
FILE 'WPIDS' ENTERED AT 13:39:39 ON 15 JAN 2004
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FILE LAST UPDATED:          12 JAN 2004      <20040112/UP>
MOST RECENT DERWENT UPDATE:     200403        <200403/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE


>>> NEW WEEKLY SDI FREQUENCY AVAILABLE --> see NEWS  <<<

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
```

PLEASE VISIT:
http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
http://thomsonderwent.com/coverage/latestupdates/ <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER GUIDES, PLEASE VISIT:
http://thomsonderwent.com/support/userguides/ <<<

>>> ADDITIONAL POLYMER INDEXING CODES WILL BE IMPLEMENTED FROM DERWENT UPDATE 200403.
THE TIME RANGE CODE WILL ALSO CHANGE FROM 018 TO 2004.
SDIS USING THE TIME RANGE CODE WILL NEED TO BE UPDATED.
FOR FURTHER DETAILS: http://thomsonderwent.com/chem/polymers/ <<<

=> d que l76
L74 77 SEA FILE=WPIDS ABB=ON PLU=ON (TRICHOTHEC!NE# OR T-2 (W) TOXIN OR TRICHODERMIN# OR (NSC (W) 267033 OR 73846) OR WG (W) 696)/BIX
L75 14026 SEA FILE=WPIDS ABB=ON PLU=ON (CANCER? OR MALIGN? OR NEOPLAS? OR TUMOR? OR TUMOUR? OR CARCINO? OR ADENO? OR SARCOMA?)/BIX AND (LUNG# OR PULMON?)/BIX
L76 0 SEA FILE=WPIDS ABB=ON PLU=ON L74 AND L75

Combo of Compounds (FT) AND Lung Cancer (FT)

=> => dup rem l39 l37 l46 l69 l73 l76
L76 HAS NO ANSWERS
PROCESSING COMPLETED FOR L39
PROCESSING COMPLETED FOR L37
PROCESSING COMPLETED FOR L46
PROCESSING COMPLETED FOR L69
PROCESSING COMPLETED FOR L73
PROCESSING COMPLETED FOR L76
L78 15 DUP REM L39 L37 L46 L69 L73 L76 (4 DUPLICATES REMOVED)
ANSWERS '1-4' FROM FILE CAPLUS
ANSWER '5' FROM FILE USPATFULL
ANSWER '6' FROM FILE CANCERLIT
ANSWERS '7-9' FROM FILE EMBASE
ANSWERS '10-12' FROM FILE DRUGU
ANSWERS '13-15' FROM FILE BIOSIS

=> => d ibib abs hitrn 1-5;d iall 6-
YOU HAVE REQUESTED DATA FROM FILE 'USPATFULL, CAPLUS, CANCERLIT, EMBASE, DRUGU, BIOSIS' - CONTINUE? (Y)/N:y

L78 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 1997:342720 CAPLUS
DOCUMENT NUMBER: 127:64507
TITLE: Two-step pretargeting methods using improved biotin-active agent conjugates
INVENTOR(S): Reno, John M.; Theodore, Louis J.; Gustavson, Linda M.
PATENT ASSIGNEE(S): Neorx Corporation, USA
SOURCE: U.S., 80 pp., Cont.-in-part of U.S. Ser. No. 995,381, abandoned.

CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 14
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5630996	A	19970520	US 1993-122979	19930916
US 5283342	A	19940201	US 1992-895588	19920609
EP 1138334	A2	20011004	EP 2001-201994	19930607
EP 1138334	A3	20020403		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE				
US 5911969	A	19990615	US 1994-329617	19941026
US 6287536	B1	20010911	US 1997-788339	19970127
US 2002034511	A1	20020321	US 2001-920454	20010801

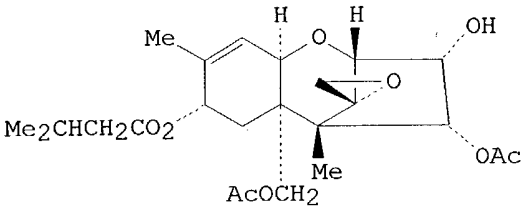
PRIORITY APPLN. INFO.:
US 1992-895588 A2 19920609
US 1992-995381 B2 19921223
US 1992-995383 B2 19921223
EP 1993-915235 A3 19930607
WO 1993-US5406 A1 19930607
US 1993-122979 A3 19930916
US 1997-788339 A1 19970127

OTHER SOURCE(S): MARPAT 127:64507

AB Methods, compds., compns. and kits that relate to pretargeted delivery of diagnostic and therapeutic agents are disclosed. In particular, methods for radio-metal labeling of biotin and for improved radiohalogenation of biotin, as well as related compds., are described. Also, clearing agents, anti-ligand-targeting moiety conjugates, target cell retention enhancing moieties and addnl. methods are discussed. The method comprises (1) administering a 1st conjugate of antibody or fragment and streptavidin and allowing time for accumulation in target tissue (tumor), and (2) subsequently administering a 2nd biotindase-resistant conjugate of biotin and DOTA derivative (chelated with radio-metal, e.g. 99mTc or 186Re). Asialoorosomucoid may be used as clearing agent for maximize targeting (tumor:blood) ratio.

IT **51724-48-2D, Trichothecene,** 2-pyridinyldithio derivs.
51724-48-2D, Trichothecene, N-hydroxysuccinimide derivs.
RL: RCT (Reactant); RACT (Reactant or reagent)
(two-step pretargeting methods using conjugate of antibody and streptavidin or avidin and conjugate of biotin and DOTA radioisotope complex for treating **tumor**)

L78 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 2
ACCESSION NUMBER: 1987:613316 CAPLUS
DOCUMENT NUMBER: 107:213316
TITLE: Effects of low-level long-term oral exposure to **T-2 toxin** in CD-1 mice
AUTHOR(S): Schiefer, H. B.; Rousseaux, C. G.; Hancock, D. S.; Blakley, B. R.
CORPORATE SOURCE: Toxicol. Res. Cent., Univ. Saskatchewan, Saskatoon, SK, S7N 0W0, Can.
SOURCE: Food and Chemical Toxicology (1987), 25(8), 593-601
CODEN: FCTOD7; ISSN: 0278-6915
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB In a 16-mo feeding study, male and female mice received semisynthetic diets containing 0, 1.5, or 3.0 ppm T 2 toxin (I). Feed consumption, body-weight gains, clin. findings (including hematol. examns. at 16 mo), and the development of external lesions were recorded. At 3, 6, 12, and 16 mo, animals were killed for assessment of their immune function. Disease-related deaths did not differ among groups. Histol. examination of all organs revealed significant differences from controls in the incidence of pulmonary adenomas and hepatic adenomas in the 3.0-ppm group. Other treatment-related findings were an increased prevalence of epithelial hyperplasia in the forestomach of animals treated with, and increased heart wts. in treated male mice. T-lymphocyte-dependent humoral immunity tests did not reveal treatment effects and hematol. revealed no particular trends. Thus, chronic feeding of I at low levels is not immunosuppressive but has a carcinogenic or tumor-promoting effect in mice.

L78 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1990:133904 CAPLUS
DOCUMENT NUMBER: 112:133904
TITLE: Use of cell cultures for predicting the biological effects of mycotoxins
AUTHOR(S): Robbana-Barnat, Saida; LaFarge-Frayssinet, Christiane; Frayssinet, Charles
CORPORATE SOURCE: Lab. Pathol. Cell., Inst. Rech. Sci. Cancer, Villejuif, 94802, Fr.
SOURCE: Cell Biology and Toxicology (1989), 5(2), 217-26
CODEN: CBTOE2; ISSN: 0742-2091
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A system is described for toxicol. anal. of mycotoxins using cell cultures of different origins. The response of several cell types to 14 mycotoxins was obtained in 3 days. This approach allowed us to: demonstrate and quantify a toxic effect, define some organ specificity related to the preferential action on a particular cell type, and detect an immunosuppressive effect. The system can be used for toxicol. screening; it also has a predictive value for the pathol. effects of tested products.

IT **4682-50-2, Trichodermin**
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(immunosuppression activity and toxicity of, in animal cell cultures, organs specificity in relation to)

L78 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:466155 CAPLUS
DOCUMENT NUMBER: 103:66155
TITLE: A gas chromatographic procedure for the toxicological determination of **trichothecenes** in human tissues and body fluids

AUTHOR(S): Heyndrickx, A.; Sookvanichsilp, N.; Van den Heede, M.
CORPORATE SOURCE: Dep. Toxicol., State Univ. Ghent, Ghent, 9000, Belg.
SOURCE: Archives Belges de Medecine Sociale, Hygiene, Medecine du Travail et Medecine Legale (1984), Suppl.(Proc.-World Congr. "New Compd. Biol. Chem. Warf.: Toxicol. Eval., 1st, 1984), 132-42
CODEN: ABMHAM; ISSN: 0003-9578
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Postmortem human tissues and body fluids, which were collected from 2 Iranian soldiers, were analyzed for trichothecene mycotoxins, because of their reported use in chemical warfare. The samples were extracted with acetonitrile, Me2CO, CHCl3, or EtOAc, and according to the nature of the sample a further purification had to be performed by washing the exts. with n-hexane or by reextg. with CHCl3. The XAD-2 resin was chosen for the final clean-up of all exts. The purified exts. were analyzed by gas chromatog. with electron capture detection. None of the sample chromatograms exhibited peaks corresponding to those of the trichothecene stds.

IT **51724-48-2D**, derivs.
RL: BIOL (Biological study)
(mycotoxins, determination of, in human tissues and body fluids by gas chromatog.)

L78 ANSWER 5 OF 15 USPATFULL on STN
ACCESSION NUMBER: 2003:187405 USPATFULL
TITLE: Pretargeting methods and compounds
INVENTOR(S): Theodore, Louis J., Lynnwood, WA, UNITED STATES
Axworthy, Donald B., Brier, WA, UNITED STATES
Reno, John M., Brier, WA, UNITED STATES
PATENT ASSIGNEE(S): NeoRx Corporation, Seattle, WA, UNITED STATES, 98119 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003129191	A1	20030710
APPLICATION INFO.:	US 2002-125788	A1	20020417 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-561736, filed on 25 Apr 2000, GRANTED, Pat. No. US 6416738 Continuation of Ser. No. US 1994-350551, filed on 7 Dec 1994, GRANTED, Pat. No. US 6075010 Continuation-in-part of Ser. No. US 1993-163184, filed on 7 Dec 1993, ABANDONED Continuation-in-part of Ser. No. WO 1993-US5406, filed on 7 Jun 1993, PENDING Continuation-in-part of Ser. No. US 1992-995381, filed on 23 Dec 1992, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300, SEATTLE, WA, 98104-7092
NUMBER OF CLAIMS: 48
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Page(s)
LINE COUNT: 5470
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods, compounds, compositions and kits that relate to pretargeted delivery of diagnostic and therapeutic agents are disclosed. In particular, methods for radiometal labeling of biotin, as well as related compounds, are described. Clearing agents and clearance

mechanisms are also discussed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

YOU HAVE REQUESTED DATA FROM FILE 'USPATFULL, CAPLUS, CANCERLIT, EMBASE, DRUGU, BIOSIS' - CONTINUE? (Y)/N:y

YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y

L78 ANSWER 6 OF 15 CANCERLIT on STN
ACCESSION NUMBER: 84130001 CANCERLIT
DOCUMENT NUMBER: 84130001 PubMed ID: 6697331
TITLE: Anguidine: a broad phase II study of the Southeastern Cancer Study Group.
AUTHOR: Adler S S; Lowenbraun S; Birch B; Jarrell R; Garrard J
CONTRACT NUMBER: CA-03013 (NCI)
CA-03177 (NCI)
CA-29456 (NCI)
+
SOURCE: CANCER TREATMENT REPORTS, (1984 Feb) 68 (2) 423-5.
Journal code: 7607107. ISSN: 0361-5960.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: MEDLINE; Priority Journals
OTHER SOURCE: MEDLINE 84130001
ENTRY MONTH: 198404
ENTRY DATE: Entered STN: 19941107
Last Updated on STN: 19941107

ABSTRACT:
Anguidine, a phase II agent, was used to treat 276 patients with solid tumors. The overall evaluability rate was 68%. Hematologic toxicity was substantial but not prohibitive. There were no complete responses, two partial responses, and 12 stabilizations.

CONTROLLED TERM: Check Tags: Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
*Adenocarcinoma: DT, drug therapy
Breast Neoplasms: DT, drug therapy
Drug Evaluation
Head and Neck Neoplasms: DT, drug therapy
Hematologic Diseases: CI, chemically induced
Kidney Neoplasms: DT, drug therapy
Leukocyte Count
Lung Neoplasms: DT, drug therapy
Melanoma: DT, drug therapy
Platelet Count
*Sesquiterpenes: TU, therapeutic use
Trichothecenes: AE, adverse effects
***Trichothecenes: TU, therapeutic use**
CAS REGISTRY NO.: 2270-40-8 (diacetoxyscirpenol)
CHEMICAL NAME: 0 (Sesquiterpenes); 0 (**Trichothecenes**)

L78 ANSWER 7 OF 15 EMBASE on STN
DUPLICATE 3

ACCESSION NUMBER: 81031287 EMBASE
DOCUMENT NUMBER: 1981031287
TITLE: Low **tumor** incidence in rats with long-term feeding of fusarenon-X, a cytotoxic **trichothecene** produced by Fusarium nivale.
AUTHOR: Saito M.; Horiuchi T.; Ohtsubo K.; et al.
CORPORATE SOURCE: Dept. Carcinogenes. Cancer Susceptibility, Inst. Med. Sci., Univ. Tokyo, Japan
SOURCE: Japanese Journal of Experimental Medicine, (1980) 50/4 (293-302).
CODEN: JJEMAG
COUNTRY: Japan
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
030 Pharmacology
016 Cancer
LANGUAGE: English
ABSTRACT:
In order to examine **tumorigenic** effects of fusarenon-X, a ***trichothecene*** compound produced by Fusarium nivale, feeding experiments on 151 male Donryu rats were carried out. A daily dose of 105 μg (7 ppm in the diet) or 50 μg (3.5 ppm)/animal of fusarenon-X was given for 1 or 2 years. Although the animals of the experimental groups showed lower body weight than controls and were more liable to be afflicted by **pulmonary** infections, **tumor** incidences were as low as that of the control group. However, several unusual **tumors** were observed only in the experimental groups: 1 **adenocarcinoma** of the stomach, 2 papillary ***carcinomas*** of the urinary bladder, 1 adrenocortical **adenoma**, and 1 leukemia.

CONTROLLED TERM: Medical Descriptors:
***carcinogenesis**
*diet
*fusarium
adrenal cortex adenoma
adrenal cortex carcinoma
bladder carcinoma
dose response
leukemia
stomach carcinoma
bladder
endocrine system
drug response
animal experiment
oral drug administration
stomach
rat
Drug Descriptors:
*fusarenon x
CAS REGISTRY NO.: (fusarenon x) 23255-69-8

Structure shown after bibliographic hits

L78 ANSWER 8 OF 15 EMBASE
on STN
ACCESSION NUMBER: 1999073194 EMBASE
TITLE: Fumonisins and neural tube defects in South Texas.
AUTHOR: Hendricks K.
CORPORATE SOURCE: K. Hendricks, Infect. Dis. Epidemiol./Surveillance, Texas Department of Health, 1100 West 49th Street, Austin, TX

78756, United States
SOURCE: Epidemiology, (1999) 10/2 (198-200).
Refs: 25
ISSN: 1044-3983 CODEN: EPIDEY
COUNTRY: United States
DOCUMENT TYPE: Journal; (Short Survey)
FILE SEGMENT: 004 Microbiology
008 Neurology and Neurosurgery
017 Public Health, Social Medicine and Epidemiology
052 Toxicology
LANGUAGE: English

CONTROLLED TERM: Medical Descriptors:
*neural tube defect: EP, epidemiology
United States
fusarium moniliforme
animal food
corn
risk factor
encephalomalacia
lung edema
liver toxicity
carcinogenicity
hematocrit
food and drug administration
human
nonhuman
short survey
priority journal
Drug Descriptors:
*fumonisin b1: TO, drug toxicity
zearalenone: TO, drug toxicity
sphingolipid: EC, endogenous compound
mycotoxin: TO, drug toxicity
folic acid
receptor: EC, endogenous compound
cholesterol: EC, endogenous compound
sphingosine derivative
synthetase
ceramide derivative
growth factor receptor: EC, endogenous compound
tumor necrosis factor: EC, endogenous compound
interleukin 1: EC, endogenous compound
nerve growth factor: EC, endogenous compound
citrinin: TO, drug toxicity
cyclopiazonic acid: TO, drug toxicity
ochratoxin: TO, drug toxicity
patulin: TO, drug toxicity
penicillic acid: TO, drug toxicity
sterigmatocystin: TO, drug toxicity
trichothecene derivative: TO, drug toxicity

CAS REGISTRY NO.: (fumonisin b1) 116355-83-0; (zearalenone) 17924-92-4; (folic acid) 59-30-3, 6484-89-5; (cholesterol) 57-88-5; (synthetase) 9031-56-5, 9031-57-6; (nerve growth factor) 9061-61-4; (citrinin) 11118-72-2, 518-75-2; (cyclopiazonic acid) 18172-33-3, 83136-88-3; (ochratoxin) 303-47-9, 37203-43-3; (patulin) 149-29-1; (penicillic acid) 90-65-3; (sterigmatocystin) 10048-13-2

L78 ANSWER 9 OF 15 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 79160009 EMBASE
DOCUMENT NUMBER: 1979160009
TITLE: Toxicity of Aspergillus and Fusarium species isolated from forage and bronchial aspirates of patients suffering from bronchial **cancer.**
AUTHOR: Caretta G.; Del Frate G.; Picco A.M.; et al.
CORPORATE SOURCE: Cent. Micol. Med. R. Ciferri e P. Redaelli, Univ. Pavia, Pavia, Italy
SOURCE: Microbiologica, (1978) VOL.1/- (57-65).
CODEN: MIBLDR
COUNTRY: Italy
DOCUMENT TYPE: Journal
FILE SEGMENT: 037 Drug Literature Index
016 Cancer
004 Microbiology
030 Pharmacology
015 Chest Diseases, Thoracic Surgery and Tuberculosis
011 Otorhinolaryngology
LANGUAGE: English
ABSTRACT:

255 strains, 113 of which Aspergillus and 142 Fusarium, were tested for their ability to elaborate mycotoxins in laboratory culture. Toxigenic species of the genus Aspergillus were: A. flavus (6 strains) and A. fumigatus (3 strains). All A. fumigatus strains and 3 A. flavus strains were isolated from bronchial aspirates of patients suffering from bronchial **cancer.** The isolates of A. flavus produced aflatoxins B1 and B1+B2; the isolates of A. fumigatus produced aflatoxins B2+G1, G2 and G1. The other strains of A. flavus were isolated from forage, peanut flour and sputum, respectively. We have isolated species of the genus Fusarium from forage (F. culmorum and F. equiseti), soil (F. moniliforme and F. oxysporum) and air (F. roseum var. gibbosum). The toxins elaborated by these strains were **trichothecenes, T-**
2 **toxin** and diacetoxyscirpenol, and zearalenone. Studies performed on the effects of different herbicides and fungicides on the production of aflatoxin B1 by a strain of A. flavus, showed that growth of A. flavus in the presence of Diuron (DMU) and Pyrazon (PCA) yielded significant aflatoxin B1 levels.

CONTROLLED TERM: Medical Descriptors:
*aspergillus
*alicap
*fusarium
*lenacil
***lung cancer**
*metham sodium
clinical study
ecology
higher plant
in vitro study
animal experiment
fungus
respiratory system
major clinical study
cytology
Drug Descriptors:
*aflatoxin

*dacthal
*dinoseb
*diuron
*zineb
*nortriptyline
*phenmedipham
*phenylbutazone
tiezene
chloridazon
metham sodium
aretil
lenacil
alicap
unclassified drug

CAS REGISTRY NO.: (aflatoxin) 1402-68-2; (dacthal) 1861-32-1; (dinoseb) 88-85-7; (diuron) 330-54-1; (zineb) 12122-67-7; (nortriptyline) 72-69-5, 894-71-3; (phenmedipham) 13684-63-4; (phenylbutazone) 129-18-0, 50-33-9, 8054-70-4; (chloridazon) 1698-60-8; (metham sodium) 137-42-8; (lenacil) 2164-08-1

CHEMICAL NAME: Tiezene; Pyramin; Vapam; Karmex; Betanal; Dacthal; Aretil; Venzar; Alicap

L78 ANSWER 10 OF 15 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2003-42595 DRUGU C P
TITLE: Structures and cytotoxic properties of trichoverroids and their macrolide analogues produced by saltwater culture of Myrothecium verrucaria.
AUTHOR: Amagata T; Rath C; Rigot J F; Tarlov N; Tenney K; Valeriote F A; Crews P
CORPORATE SOURCE: Univ.California
LOCATION: Santa Cruz., Cal.; Detroit, Mich., USA
SOURCE: J.Med.Chem. (40, No. 20, 4342-50, 2003) 2 Fig. 3 Tab. 42 Ref.
CODEN: JMCMAR ISSN: 0022-2623
AVAIL. OF DOC.: Dept. of Chemistry and Biochemistry and Institute for Marine Sciences, University of California-Santa Cruz, Santa Cruz, CA 95064, U.S.A. (P.C.). (e-mail: phil@chemistry.ucsc.edu).
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

Saltwater culture of the Hawaiian sponge-derived fungus Myrothecium verrucaria yielded 3 new **trichothecenes**, 3-hydroxyroridin E (1a, NSC-724381), 13'-acetyltrichoverrin B (2, NSC-720697), and miophytocen C (3, NSC-722594), and 9 known analogs (1b, NSC-720909), (4, NSC-20694), (5, NSC-20693), (6, NSC-20162), (7a, NSC-20737), (7b, NSC-20910), (8, NSC-20696), (9a, NSC-20696), and (9b, NSC-20695). All except (3) showed significant cytotoxicity vs. murine and human **tumor** cells, using anguidin (17) as standard. Structure-activity relationships were assessed: (i) all 12,13-poxy analogs were active; (ii) a 2'-OH group conferred potency; (iii) the favored stereochemistry at C6'-C13' was 6'R,13'S for (7a,b) and 6'S,13'R for (1a,b).

SECTION HEADING: C Chemistry
P Pharmacology

CLASSIF. CODE: 38 Structure/Activity
52 Chemotherapy - non-clinical

71 Medicinal Chemistry
72 New Drugs
73 Trial Preparations

CONTROLLED TERM:
NSC-722594 *RC; NSC-720909 *RC; NSC-720694 *RC; NSC-720693 *RC; NSC-720162 *RC; NSC-720737 *RC; NSC-720910 *RC; NSC-720696 *RC; NSC-720696 *RC; NSC-720695 *RC; ANGUIDIN *RC; NEW *FT; TRIAL-PREP. *FT; ISOL. *FT; MYROTHECIUM *FT; VERRUCARIA *FT; STRUCT.DET. *FT; STEREOCHEM. *FT; IN-VITRO *FT; CYTOSTATIC *FT; CYTOSTATICS *FT; HL60-CELL *FT; HCT116-CELL *FT; A498-CELL *FT; MDA-MB435-CELL *FT; FUNGUS *FT; TISSUE-CULTURE *FT; LEUKEMIA *FT; **TUMOR**-CELL *FT
[01] NSC-724381 *OC; NSC-724381 *PH; DR0113755 *RN; OC *FT; PH *FT
[02] NSC-720697 *OC; NSC-720697 *PH; DR0113756 *RN; OC *FT; PH *FT
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L78 ANSWER 11 OF 15 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 2000-16208 DRUGU C P M
TITLE: New **trichothecenes** isolated from Holarrhena floribunda.
AUTHOR: Loukaci A; Kayser O; Bindseil K U; Siems K; Frevert J; Abreu P M
CORPORATE SOURCE: Univ.Lisbon-New; Univ.Berlin-Free; Analyticon
LOCATION: Caparica, Port.; Berlin; Potsdam, Ger.
SOURCE: J.Nat.Prod. (63, No. 1, 52-56, 2000) 1 Fig. 5 Tab. 36 Ref.
CODEN: JNPRDF ISSN: 0163-3864 Suspend as parent
AVAIL. OF DOC.: Departamento de Quimica, Centro de Quimica Fina e Biotecnologia, FCT-UNL, 2825-114 Caparica, Portugal. (P.M.A.) (e-mail: pma@dq.fct.unl.pt).
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

Bioassay-guided fractionation of an extract of Holarrhena floribunda stems led to the isolation of the new **trichothecenes**, 8-dihydrotrichothecinol A (1), loukacinol A (2) and loukacinol B (3), and the known compounds, trichothecolone (4), trichothecin (5), trichothecinol A (6), rosenonolactone (7), 6-beta-hydroxy rosenonolactone (8) and rosololactone (9). Compounds (1 and 6) showed significant cytotoxicity towards several human **tumor** cell lines, whereas compound (8) showed moderate and weak antileishmanial activity against extracellular and intracellular Leishmania donovani, respectively.

SECTION HEADING: C Chemistry
P Pharmacology
M Microbiology

CLASSIF. CODE: 23 Antimicrobials
52 Chemotherapy - non-clinical
55 Fungicides
71 Medicinal Chemistry
72 New Drugs

CONTROLLED TERM:
ISOL. *FT; HOLARRHENA *FT; BOTANY *FT; FLORIBUNDA *FT;

STRUCT.DET. *FT; IN-VITRO *FT
[01] TRICHOTHECINOL-A *OC; TRICHOTHECINOL-A *PH; DR9700421 *RN; CYTOSTATIC *FT; KB-CELL *FT; SK-MEL30-CELL *FT; MELANOMA *FT; A549-CELL *FT; MCF7-CELL *FT; CYTOSTATICS *FT; TISSUE-CULTURE *FT; **CARCINOMA** *FT; **TUMOR**-CELL *FT; **ADENOCARCINOMA** *FT; TISSUE-CULTURE *FT; **TUMOR**-CELL *FT; OC *FT; PH *FT
[02] DR0018009 *RN; NEW *FT; CYTOSTATIC *FT; KB-CELL *FT; SK-MEL30-CELL *FT; MELANOMA *FT; A549-CELL *FT; MCF7-CELL *FT; TISSUE-CULTURE *FT; **CARCINOMA** *FT; **TUMOR**-CELL *FT; **ADENOCARCINOMA** *FT; TISSUE-CULTURE *FT; **TUMOR**-CELL *FT; OC *FT; PH *FT
[03] HYDROXYROSENONOLACTONE-6-BETA *OC; HYDROXYROSENONOLACTONE-6-BETA *PH; DR0018011 *RN; LEISHMANIA *FT; PROTOZOACIDE *FT; DONOVANI *FT; MAJOR *FT; INFANTUM *FT; ENRIETTI *FT; CYTOTOX. *FT; MACROPHAGE *FT; PROTOZOACIDES *FT; NEW *FT; PROTOZOON *FT; RES *FT; OC *FT; PH *FT

FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L78 ANSWER 12 OF 15 DRUGU COPYRIGHT 2004 THOMSON DERWENT on STN
ACCESSION NUMBER: 1997-39316 DRUGU P T S
TITLE: Monoclonal antibodies in drug targeting.
AUTHOR: Panchagnula R; Dey C S
CORPORATE SOURCE: Nat.Inst.Pharm.Ed+Res.Nagar
LOCATION: Punjab, India
SOURCE: J.Clin.Pharm.Ther. (22, No. 1, 7-19, 1997) 141 Ref.
CODEN: JCPTED ISSN: 0269-4727
AVAIL. OF DOC.: Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research (NIPER), Sector-67, S.A.S. Nagar, Punjab-160 062, India.
LANGUAGE: English
DOCUMENT TYPE: Journal

ABSTRACT:

The use of monoclonal antibodies in drug targeting is reviewed, with reference to their production, drug-antibody conjugates, immunotoxins, their toxicity and to the limitations of their use.

SECTION HEADING: P Pharmacology
T Therapeutics
S Adverse Effects

CLASSIF. CODE: 20 Immunological
35 Adverse Reactions
50 Biological Response Modifiers
51 Chemotherapy - clinical
65 Drug Delivery
69 Reviews

CONTROLLED TERM:
CARCINOMA *TR; **CARCINOMA** *OC; INTOXICATION *TR; **NEOPLASM** *TR; **NEOPLASM** *OC; REVIEW *FT; LAB.ANIMAL *FT; IN-VIVO *FT; CASES *FT; IN-VITRO *FT; **TUMOR**-CELL *FT; CYTOSTATIC *FT; TISSUE-CULTURE *FT
[01] TARGETING *FT; MAIN-TOPIC *FT; MONOCLONAL *FT; ANTIBODY *FT;

CONJUGATE *FT; DRUG-DELIVERY *FT; OC *FT
[02] CHLORAMBUCIL *OC; DOXORUBICIN *OC; ADRIAMYCIN *OC; ADRIAMYCIN *OC; DAUNORUBICIN *OC; METHOTREXATE *OC; TRIAZIQUONE *OC; TRENIMON *OC; TRENIMON *OC; VINDESINE *OC; MELPHALAN *OC; CISPLATIN *OC; FLUOROURACIL *OC; DIPHTHERIA-TOXIN *OC; PS.EXOTOXIN *OC; RICIN *OC; ABRIN *OC; RICIN-A-CHAIN *OC; RICIN-B-CHAIN *OC; CHLORAMBUCIL *TR; DOXORUBICIN *TR; ADRIAMYCIN *TR; ADRIAMYCIN *TR; DAUNORUBICIN *TR; METHOTREXATE *TR; TRIAZIQUONE *TR; TRENIMON *TR; TRENIMON *TR; VINDESINE *TR; MELPHALAN *TR; CISPLATIN *TR; FLUOROURACIL *TR; DIPHTHERIA-TOXIN *TR; PS.EXOTOXIN *TR; RICIN *TR; ABRIN *TR; RICIN-A-CHAIN *TR; RICIN-B-CHAIN *TR; DIGOXIN *AE; DIGITOXIN *AE; COLCHICINE *AE; PARAQUAT *AE; PHENCYCLIDINE *AE; OC *FT; TR *FT; AE *FT
FIELD AVAIL.: AB; LA; CT
FILE SEGMENT: Literature

L78 ANSWER 13 OF 15 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1999:217831 BIOSIS
DOCUMENT NUMBER: PREV199900217831
TITLE: A review of worldwide contamination of cereal grains and animal feed with Fusarium mycotoxins.
AUTHOR(S): Placinta, C. M.; D'Mello, J. P. F. [Reprint author]; Macdonald, A. M. C.
CORPORATE SOURCE: Department of Biotechnology, Scottish Agricultural College, West Mains Road, Edinburgh, EH9 3JG, UK
SOURCE: Animal Feed Science and Technology, (March 31, 1999) Vol. 78, No. 1-2, pp. 21-37. print.
CODEN: AFSTDH. ISSN: 0377-8401.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 May 1999
Last Updated on STN: 26 May 1999

ABSTRACT:From a global perspective, three classes of Fusarium mycotoxins may be considered to be of particular importance in animal health and productivity. Within the **trichothecene** group, deoxynivalenol (DON) is widely associated with feed rejection in pigs, while **T-2** ***toxin*** can precipitate reproductive disturbances in sows. Another group comprising zearalenone (ZEN) and its derivatives is endowed with oestrogenic properties. The third category includes the fumonisins which have been linked with specific toxicity syndromes such as equine leukoencephalomalacia (ELEM) and porcine **pulmonary** oedema. Many toxigenic species of Fusarium are also common pathogens of cereal plants, causing diseases such as head blight of wheat and barley and ear rot of maize. Consequently, when cereal plants are infected with these fungi, there is a risk that grain may become contaminated with Fusarium mycotoxins and that these may subsequently be transferred to compound feeds. The surveillance of grain and animal feed for the occurrence of Fusarium mycotoxins continues to attract worldwide attention and has been the subject of extensive investigations over recent years. For example, high incidence rates of contamination with DON and another **trichothecene**, nivalenol (NIV), have been reported in maize samples in New Zealand. In Poland, unacceptably high values (up to 927 mg/kg) for DON were recorded for maize grain and cobs. Potentially harmful levels of DON (up to 40 mg/kg) were also observed in wheat produced in Germany, Poland, Japan, New Zealand, USA, Canada and Argentina. Samples of barley grain in Norway, Japan and USA were found with DON levels of up to 71 mg/kg. In the Norwegian study oat samples were also contaminated with DON at levels ranging from 7 to 62 mg/kg grain. Abnormally high concentrations of both NIV and ZEN have been observed in some

Japanese barley samples (up to 26 and 15 mg/kg, respectively), and in maize produced in New Zealand (up to 7 and 10.5 mg/kg, respectively). Other ***trichothecenes*** such as 3-acetyl DON, diacetyoxyscirpenol (DAS), ***T*** **-2 toxin** and HT-2 toxin have also been found in cereals and animal feed in both temperate and tropical countries. In Uruguay all samples of maize-based animal feeds tested were positive for fumonisin B1 (FB1). However, highest FB1 values were observed in South Africa for compound feed (11 000 mug/kg), and in Thailand and China for maize (18 800 and 25 970 mug/kg, respectively). In a study of Argentinian maize, FB2 was the major fumonisin at values of up to 11 300 mug/kg. An alarming feature of several surveys is that in the tropics in particular, several Fusarium mycotoxins may co-occur with each other and with aflatoxin B1, an Aspergillus compound sharing ***carcinogenic*** properties with fumonisins. It is concluded that, although sample size has been small in a number of surveys, there is nevertheless unequivocal evidence of global contamination of cereal grains and animal feed with several **trichothecenes**, ZEN and fumonisins. Furthermore, it is clear that legislation for the control of these mycotoxins in animal feed is now overdue and that further work is required to exploit cereal genotypes that are resistant to diseases caused by toxigenic Fusarium phytopathogens.

CONCEPT CODE: Toxicology - General and methods 22501
Food technology - General and methods 13502

INDEX TERMS: Major Concepts
Foods; Toxicology

INDEX TERMS: Chemicals & Biochemicals
deoxynivalenol: toxin; nivalenol: toxin; zearalenone: toxin; Fusarium mycotoxins; **T-2 toxin**

INDEX TERMS: Miscellaneous Descriptors
animal feed: animal feed, fungal contamination; cereal grains: fungal contamination, grain product

ORGANISM: Classifier
Fungi Imperfecti or Deuteromycetes 15500
Super Taxa
Fungi; Plantae
Organism Name
Fusarium
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants

ORGANISM: Classifier
Suidae 85740
Super Taxa
Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
pig
Taxa Notes
Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates

REGISTRY NUMBER: 51481-10-8 (deoxynivalenol)
23282-20-4 (nivalenol)
17924-92-4 (zearalenone)
21259-20-1 (**T-2 toxin**)

Structure shown after hits. One type of trichothecene

L78 ANSWER 14 OF 15 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1987:389094 BIOSIS
DOCUMENT NUMBER: PREV198733069234; BR33:69234
TITLE: MYCOTOXINS IN THE AIR.
AUTHOR(S): FLANNIGAN B [Reprint author]

CORPORATE SOURCE: DEP BREWING BIOL SCI, HERIOT-WATT UNIV, CHAMBERS ST, EDINBURGH EH1 1HX, UK

SOURCE: International Biodeterioration, (1987) Vol. 23, No. 2, pp. 73-78.
CODEN: INBIEA. ISSN: 0265-3036.

DOCUMENT TYPE: Article
FILE SEGMENT: BR
LANGUAGE: ENGLISH
ENTRY DATE: Entered STN: 12 Sep 1987
Last Updated on STN: 12 Sep 1987

CONCEPT CODE: Biochemistry studies - General 10060
Respiratory system - Pathology 16006
Toxicology - Environment and industry 22506
Neoplasms - Carcinogens and carcinogenesis 24007
Immunology - Immunopathology, tissue immunology 34508
Allergy 35500
Medical and clinical microbiology - Mycology 36008
Public health - Air, water and soil pollution 37015
Plant physiology - Chemical constituents 51522

INDEX TERMS: Major Concepts
Allergy (Clinical Immunology, Human Medicine, Medical Sciences); Clinical Endocrinology (Human Medicine, Medical Sciences); Infection; Oncology (Human Medicine, Medical Sciences); Pollution Assessment Control and Management; **Pulmonary** Medicine (Human Medicine, Medical Sciences); Toxicology

INDEX TERMS: Miscellaneous Descriptors
REVIEW HUMAN ASPERGILLUS-FLAVUS FUSARIUM-SP PENICILLIUM-OXALICUM STACHYBOTRYS-ATRA **TRICHOTHECENE** ALLERGIC RESPIRATORY DISEASES **CARCINOGENS** AIR POLLUTION

ORGANISM: Classifier
Fungi Imperfecti or Deuteromycetes 15500
Super Taxa
Fungi; Plantae
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants

ORGANISM: Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

REGISTRY NUMBER: **51724-48-2** (**TRICHOTHECENE**)

L78 ANSWER 15 OF 15 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1984:210063 BIOSIS
DOCUMENT NUMBER: PREV198477043047; BA77:43047
TITLE: CYTO TOXICITY AND ABSENCE OF MUTAGENIC ACTIVITY OF VOMI TOXIN 4 DEOXY NIVALENOL IN A HEPATOCYTE MEDIATED MUTATION ASSAY WITH V-79 CHINESE HAMSTER **LUNG** CELLS.
AUTHOR(S): ROGERS C G [Reprint author]; HEROUX-METCALF C
CORPORATE SOURCE: TOXICOL RES DIV, HEALTH PROTECTION BRANCH, HEALTH AND WELFARE CAN, OTTAWA, K1A 0L2, CAN
SOURCE: Cancer Letters, (1983) Vol. 20, No. 1, pp. 29-36.
CODEN: CALEDQ. ISSN: 0304-3835.
DOCUMENT TYPE: Article

FILE SEGMENT: BA
LANGUAGE: ENGLISH

ABSTRACT:Cytotoxicity and mutagenicity of vomitoxin (4-deoxynivalenol), a tricothecene mycotoxin produced on cereal grains by fungi of the genus Fusarium, were determined in vitro with Chinese hamster V79 cells. Cytotoxicity was shown by a reduction in colony size at 1 μg/ml (ppm); by reduction in the number and size of colonies at 2-3 μg/ml or higher; and by lethality to 80-90% of the cells at 10 μg/ml. Up to 3 μg/ml, vomitoxin was non-mutangenic to V79 cells at the hypoxanthine-guanine phosphoribosyl transferase (HGPRT) locus, with or without hepatocyte-mediated activation; and did not significantly increase the number of 6-thioguanine-resistant mutants at marginally cytotoxic levels of 6 and 8 μg/ml (data not shown). Vomitoxin, like other 12,13-epoxytricothecenes, may become cytotoxic through inhibition of protein and /or DNA synthesis, and is likely to be non-**carcinogenic**.

CONCEPT CODE:
Cytology - Animal 02506
Genetics - Animal 03506
Biochemistry studies - General 10060
Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
Biochemistry studies - Proteins, peptides and amino acids 10064
Enzymes - Physiological studies 10808
Metabolism - Proteins, peptides and amino acids 13012
Metabolism - Nucleic acids, purines and pyrimidines 13014
Food technology - Cereal chemistry 13510
Digestive system - General and methods 14001
Respiratory system - General and methods 16001
Toxicology - General and methods 22501
Neoplasms - Carcinogens and carcinogenesis 24007
Medical and clinical microbiology - Mycology 36008

INDEX TERMS:
Major Concepts
Cell Biology; Enzymology (Biochemistry and Molecular Biophysics); Genetics; Infection; Metabolism; Toxicology

INDEX TERMS:
Miscellaneous Descriptors
CHINESE HAMSTER **LUNG** V-79 CELL FUSARIUM 12 13 EPOXY **TRICHOTHECENE** HYPO XANTHINE GUANINE PHOSPHO RIBOSYL TRANSFERASE INHIBITED PROTEIN DNA SYNTHESIS

ORGANISM:
Classifier
Fungi Imperfecti or Deuteromycetes 15500
Super Taxa
Fungi; Plantae
Taxa Notes
Fungi, Microorganisms, Nonvascular Plants, Plants

ORGANISM:
Classifier
Cricetidae 86310
Super Taxa
Rodentia; Mammalia; Vertebrata; Chordata; Animalia
Taxa Notes
Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates

REGISTRY NUMBER:
51481-10-8 (VOMITOXIN)
51481-10-8 (4-DEOXYNIVALENOL)
42814-62-0 (12 13-EPOXYTRICHOTHECENE)
9016-12-0 (HYPOXANTHINE-GUANINE PHOSPHORIBOSYL TRANSFERASE)

=> => b reg

FILE 'REGISTRY' ENTERED AT 14:27:18 ON 15 JAN 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 14 JAN 2004 HIGHEST RN 637725-36-1
DICTIONARY FILE UPDATES: 14 JAN 2004 HIGHEST RN 637725-36-1

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2003

Please note that search-term pricing does apply when conducting SmartSELECT searches.

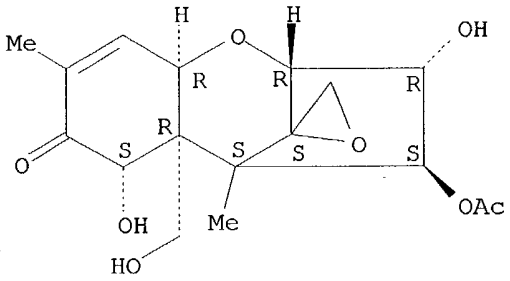
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d ide tot

L79 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN **23255-69-8** REGISTRY
CN Trichothec-9-en-8-one, 4-(acetyloxy)-12,13-epoxy-3,7,15-trihydroxy-, (3α,4β,7α)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Spiro[2,5-methano-1-benzoxepin-10,2'-oxirane], trichothec-9-en-8-one deriv.
CN Trichothec-9-en-8-one, 12,13-epoxy-3α,4β,7α,15-tetrahydroxy-, 4-acetate (8CI)
OTHER NAMES:
CN 3-Acetylnivalenol
CN 4-Acetylnivalenol
CN 4β-Acetoxy-3α,7α,15-trihydroxy-12,13-epoxytrichothec-9-en-8-one
CN Fusarenon X
CN Fusarenone
CN Fusarenone X
CN Nivalenol monoacetate
CN NSC 197211
FS STEREOSEARCH
DR 23255-72-3, 26153-10-6, 27552-17-6, 28392-39-4, 32204-36-7, 115889-63-9
MF C17 H22 O8
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, GMELIN*, MEDLINE, NAPRALERT, NIOSHTIC, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.

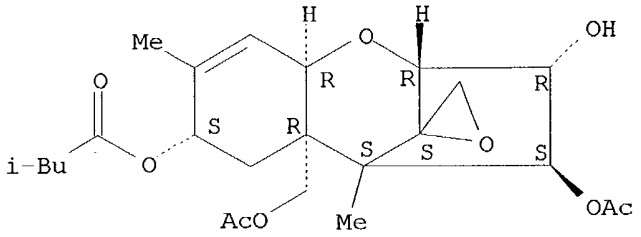


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

314 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
316 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L79 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2004 ACS on STN
RN **21259-20-1** REGISTRY
CN Trichothec-9-ene-3,4,8,15-tetrol, 12,13-epoxy-, 4,15-diacetate 8-(3-methylbutanoate), (3α,4β,8α)- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Spiro[2,5-methano-1-benzoxepin-10,2'-oxirane], trichothec-9-ene-3,4,8,15-tetrol deriv.
CN Trichothec-9-ene-3α,4β,8α,15-tetrol, 12,13-epoxy-, 4,15-diacetate 8-isovalerate (8CI)
OTHER NAMES:
CN 4β,15-Diacetoxy-8α-(3-methylbutyryloxy)-12,13-epoxytrichothec-9-en-3α-ol
CN 8α-(3-Methylbutyryloxy)-4β,15-diacetoxyscirp-9-en-3α-ol
CN Fusariotoxin T 2
CN Insariotoxin
CN Mycotoxin T 2
CN NSC 138780
CN T 2
CN T 2 mycotoxin
CN T 2 Toxin
CN Toxin T 2
FS STEREOSEARCH
DR 9061-58-9, 11051-21-1, 60119-99-5, 25152-34-5, 22916-10-5, 22916-18-3, 36653-66-4, 145427-93-6, 26400-47-5, 27640-92-2, 116163-69-0
MF C24 H34 O9
CI COM
LC STN Files: AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1542 REFERENCES IN FILE CA (1907 TO DATE)
60 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
1544 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> b home
FILE 'HOME' ENTERED AT 14:27:29 ON 15 JAN 2004

=>

```
=> b cap
FILE 'CAPLUS' ENTERED AT 15:47:23 ON 15 JAN 2004
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```



```
FILE COVERS 1907 - 15 Jan 2004  VOL 140 ISS 3
FILE LAST UPDATED: 14 Jan 2004  (20040114/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

'OBI' IS DEFAULT SEARCH FIELD FOR 'CAPLUS' FILE

=> d que l91
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L10          293 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9
L32         2241 SEA FILE=CAPLUS ABB=ON  PLU=ON  TRICHOTHEC!NE#/OBI OR TRICHODER
                 MIN#/OBI OR T-2/OBI (W) TOXIN/OBI OR (NSC/OBI (W) 267033/OBI
                 OR 73846/OBI) OR WG/OBI (W) 696/OBI
L82        67821 SEA FILE=CAPLUS ABB=ON  PLU=ON  (PROTEIN#/OBI OR POLYPEPTID?/OB
                 I) (W) (SYNTHET?/OBI OR FORM?/OBI OR COUPL?/OBI)
L87         7355 SEA FILE=CAPLUS ABB=ON  PLU=ON  (INHIBIT?/OBI OR BLOCK?/OBI)
                 (L) L82
L88           47 SEA FILE=CAPLUS ABB=ON  PLU=ON  (L10 OR L32) AND L87
L91            1 SEA FILE=CAPLUS ABB=ON  PLU=ON  L88 AND REVIEW/DT
```

Combo of Compounds (FT, RN) and Prot- dinhibition of Protein synthesis

```
=> b uspatfull
FILE 'USPATFULL' ENTERED AT 15:47:41 ON 15 JAN 2004
CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 15 Jan 2004 (20040115/PD)
FILE LAST UPDATED: 15 Jan 2004 (20040115/ED)
HIGHEST GRANTED PATENT NUMBER: US6678893
HIGHEST APPLICATION PUBLICATION NUMBER: US2004010831
CA INDEXING IS CURRENT THROUGH 15 Jan 2004 (20040115/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 15 Jan 2004 (20040115/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2003
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2003

>>>  USPAT2 is now available.  USPATFULL contains full text of the     <<<
>>>  original, i.e., the earliest published granted patents or         <<<
>>>  applications.  USPAT2 contains full text of the latest US         <<<
>>>  publications, starting in 2001, for the inventions covered in     <<<
```

```
>>>  USPATFULL.  A USPATFULL record contains not only the original     <<<
>>>  published document but also a list of any subsequent             <<<
>>>  publications.  The publication number, patent kind code, and      <<<
>>>  publication date for all the US publications for an invention     <<<
>>>  are displayed in the PI (Patent Information) field of USPATFULL   <<<
>>>  records and may be searched in standard search fields, e.g., /PN, <<<
>>>  /PK, etc.                                                         <<<

>>>  USPATFULL and USPAT2 can be accessed and searched together        <<<
>>>  through the new cluster USPATALL.  Type FILE USPATALL to          <<<
>>>  enter this cluster.                                               <<<
>>>                                                                    <<<
>>>  Use USPATALL when searching terms such as patent assignees,       <<<
>>>  classifications, or claims, that may potentially change from      <<<
>>>  the earliest to the latest publication.                           <<<

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> d que l109
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L20           19 SEA FILE=USPATFULL ABB=ON  PLU=ON  L9
L34           78 SEA FILE=USPATFULL ABB=ON  PLU=ON  (TRICHOTHEC!NE# OR TRICHODER
                   MIN# OR T-2 (W) TOXIN OR (NSC (W) 267033 OR 73846) OR WG (W)
                   696)/TI,IT,AB,CLM
L107       13612 SEA FILE=USPATFULL ABB=ON  PLU=ON  (PROTEIN# OR POLYPEPTID?)/TI
                   ,IT,AB,CLM (5A) (SYNTHET? OR FORM? OR COUPL?)/TI,IT,AB,CLM
L108         708 SEA FILE=USPATFULL ABB=ON  PLU=ON  (INHIBIT? OR BLOCK?)/TI,IT,A
                   B,CLM (5A) L107
L109           0 SEA FILE=USPATFULL ABB=ON  PLU=ON  L108 AND (L34 OR L20)
```

COMBO OF COMPOUNDS (FT, RN) AND PROTEIN SYNTH. INHIB.

```
=> b medline cancerlit
FILE 'MEDLINE' ENTERED AT 15:47:57 ON 15 JAN 2004

FILE 'CANCERLIT' ENTERED AT 15:47:57 ON 15 JAN 2004

=> d que l113
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L40           52 SEA FILE=MEDLINE ABB=ON  PLU=ON  L9
L41         1956 SEA FILE=MEDLINE ABB=ON  PLU=ON  TRICHOTHEC!NE# OR TRICHODERMIN
                   # OR T-2 (W) TOXIN OR (NSC (W) 267033 OR 73846) OR WG (W) 696
L42         1724 SEA FILE=MEDLINE ABB=ON  PLU=ON  TRICHOTHECENES+NT/CT
L110        6634 SEA PROTEIN SYNTHESIS INHIBITORS/CT
L111          28 SEA (L40 OR L41 OR L42) AND L110
L113           1 SEA L111 AND REVIEW/DT
```

COMBO OF COMPOUNDS (FT, RN) AND PROTEIN SYN. INHIB

```
=> b embase
FILE 'EMBASE' ENTERED AT 15:48:14 ON 15 JAN 2004
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 FILE COVERS 1974 TO 5 Jan 2004 (20040105/ED)
```

EMBASE has been reloaded. Enter HELP RLOAD for details.

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```
=> d que l115
L7             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHOTHECENE/CN
L8             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  TRICHODERMIN/CN
L9             2 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L62          432 SEA FILE=EMBASE ABB=ON  PLU=ON  L9
L64         1415 SEA FILE=EMBASE ABB=ON  PLU=ON  TRICHOTHEC!NE# OR T-2 (W)
                 TOXIN OR TRICHODERMIN# OR (NSC (W) 267033 OR 73846) OR WG (W)
                 696
L114        3933 SEA FILE=EMBASE ABB=ON  PLU=ON  PROTEIN SYNTHESIS INHIBITION/CT

L115          14 SEA FILE=EMBASE ABB=ON  PLU=ON  (L62 OR L64) AND L114
```

Combo of Compounds and Protein syn. inhib. (FT, RN)

```
=> b wpids
FILE 'WPIDS' ENTERED AT 15:48:28 ON 15 JAN 2004
COPYRIGHT (C) 2004 THOMSON DERWENT

FILE LAST UPDATED:          15 JAN 2004      <20040115/UP>
MOST RECENT DERWENT UPDATE:     200404        <200404/DW>
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE


>>> NEW WEEKLY SDI FREQUENCY AVAILABLE --> see NEWS  <<<

>>> PATENT IMAGES AVAILABLE FOR PRINT AND DISPLAY <<<

>>> FOR A COPY OF THE DERWENT WORLD PATENTS INDEX STN USER GUIDE,
    PLEASE VISIT:
 http://www.stn-international.de/training_center/patents/stn_guide.pdf <<<

>>> FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE
    http://thomsonderwent.com/coverage/latestupdates/          <<<

>>> FOR INFORMATION ON ALL DERWENT WORLD PATENTS INDEX USER
    GUIDES, PLEASE VISIT:
    http://thomsonderwent.com/support/userguides/              <<<

>>> ADDITIONAL POLYMER INDEXING CODES WILL BE IMPLEMENTED FROM
    DERWENT UPDATE 200403.
    THE TIME RANGE CODE WILL ALSO CHANGE FROM 018 TO 2004.
    SDIS USING THE TIME RANGE CODE WILL NEED TO BE UPDATED.
    FOR FURTHER DETAILS: http://thomsonderwent.com/chem/polymers/ <<<


=> d que l106
L74           77 SEA FILE=WPIDS ABB=ON  PLU=ON  (TRICHOTHEC!NE# OR T-2 (W)
                 TOXIN OR TRICHODERMIN# OR (NSC (W) 267033 OR 73846) OR WG (W)
                 696)/BIX
L104       16351 SEA FILE=WPIDS ABB=ON  PLU=ON  (PROTEIN# OR POLYPEPTID?)/BIX
                 (5A) (SYNTHET? OR FORM? OR COUPL?)/BIX
L105         771 SEA FILE=WPIDS ABB=ON  PLU=ON  (INHIBIT? OR BLOCK?) (5A) L104
L106           0 SEA FILE=WPIDS ABB=ON  PLU=ON  L105 AND L74
```

Combo of (FT) Compounds and Protein Syn. inhib.

```
=> dup rem l91 l109 l113 l115 l106
L109 HAS NO ANSWERS
L106 HAS NO ANSWERS
FILE 'CAPLUS' ENTERED AT 15:49:02 ON 15 JAN 2004
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FILE 'EMBASE' ENTERED AT 15:49:02 ON 15 JAN 2004
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PROCESSING COMPLETED FOR L91
PROCESSING COMPLETED FOR L109
PROCESSING COMPLETED FOR L113
PROCESSING COMPLETED FOR L115
PROCESSING COMPLETED FOR L106
L117          16 DUP REM L91 L109 L113 L115 L106 (0 DUPLICATES REMOVED)
                 ANSWER '1' FROM FILE CAPLUS
                 ANSWER '2' FROM FILE MEDLINE
                 ANSWERS '3-16' FROM FILE EMBASE

=> d ibib abs hitrn 1;d iall 2-     OTHER DATABASES
       CAP ANSWERS
L117 ANSWER 1 OF 16  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        1978:146814  CAPLUS
DOCUMENT NUMBER:         88:146814
TITLE:                   Inhibition of protein synthesis by
                         trichothecenes
AUTHOR(S):               McLaughlin, Calvin S.; Vaughan, Maurice H.; Campbell,
                         Iain M.; Wei, Cha Mer; Stafford, Mary E.; Hansen, B.
                         S.
CORPORATE SOURCE:        Dep. Mol. Biol. Biochem., Univ. California, Irvine,
                         CA, USA
SOURCE:                  Mycotoxins Hum. Anim. Health, Proc. Conf. (1977),
                         Meeting Date 1976, 263-73.  Editor(s): Rodricks,
                         Joseph V.; Hesseltine, Clifford W.; Mehlman, Myron A.
                         Pathotox Publ., Inc.: Park Forest South, Ill.
                         CODEN: 37OYAU
DOCUMENT TYPE:           Conference; General Review
LANGUAGE:                English
AB   A review with 25 refs. on protein synthesis inhibition by trichothecene
     mycotoxins.
IT   51724-48-2D, derivative
     RL: BIOL (Biological study)
        (protein formation inhibition by)


YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L117 ANSWER 2 OF 16     MEDLINE on STN
ACCESSION NUMBER:   96217454     MEDLINE
DOCUMENT NUMBER:    96217454   PubMed ID: 8637056
TITLE:              Toxicology of deoxynivalenol (vomitoxin).
AUTHOR:             Rotter B A; Prelusky D B; Pestka J J
CORPORATE SOURCE:   Centre for Food and Animal Research, Agriculture and
```

Agri-Food Canada, Ottawa, Ontario, Canada.
SOURCE: JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH, (1996 May) 48 (1) 1-34. Ref: 244
Journal code: 7513622. ISSN: 0098-4108.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199607
ENTRY DATE: Entered STN: 19960719
Last Updated on STN: 19960719
Entered Medline: 19960705

ABSTRACT:
Trichothecene mycotoxins are a group of structurally similar fungal metabolites that are capable of producing a wide range of toxic effects. Deoxynivalenol (DON, vomitoxin), a **trichothecene**, is prevalent worldwide in crops used for food and feed production, including in Canada and the United States. Although DON is one of the least acutely toxic ***trichothecenes*** , it should be treated as an important food safety issue because it is a very common contaminant of grain. This review focuses on the ability of DON to induce toxicologic and immunotoxic effects in a variety of cell systems and animal species. At the cellular level, the main toxic effect is inhibition of protein synthesis via binding to the ribosome. In animals, moderate to low ingestion of toxin can cause a number of as yet poorly defined effects associated with reduced performance and immune function. The main overt effect at low dietary concentrations appears to be a reduction in food consumption (anorexia), while higher doses induce vomiting (emesis). DON is known to alter brain neurochemicals. The serotoninergic system appears to play a role in mediation of the feeding behavior and emetic response. Animals fed low to moderate doses are able to recover from initial weight losses, while higher doses induce more long-term changes in feeding behavior. At low dosages of DON, hematological, clinical, and immunological changes are also transitory and decrease as compensatory/adaptation mechanisms are established. Swine are more sensitive to DON than mice, poultry, and ruminants, in part because of differences in metabolism of DON, with males being more sensitive than females. The capacity of DON to alter normal immune function has been of particular interest. There is extensive evidence that DON can be immunosuppressive or immunostimulatory, depending upon the dose and duration of exposure. While immunosuppression can be explained by the inhibition of translation, immunostimulation can be related to interference with normal regulatory mechanisms. In vivo, DON suppresses normal immune response to pathogens and simultaneously induces autoimmune-like effects which are similar to human immunoglobulin A (IgA) nephropathy. Other effects include superinduction of cytokine production by T helper cells (in vitro) and activation of macrophages and T cells to produce a proinflammatory cytokine wave that is analogous to that found in lipopolysaccharide-induced shock (in vivo). To what extent the elevation of cytokines contributes to metabolic effects such as decreased feed intake remains to be established. Although these effects have been largely characterized in the mouse, several investigations with DON suggest that immunotoxic effects are also likely in domestic animals. Further toxicology studies and an assessment of the potential of DON to be an etiologic agent in human disease are warranted.

CONTROLLED TERM: Check Tags: Animal; Human
Absorption
Cell Division: DE, drug effects
Food Contamination

Guidelines
Immune System: CY, cytology
*Immune System: DE, drug effects
Immunosuppressive Agents: TO, toxicity
Immunotoxins: TO, toxicity
Neurotoxins: TO, toxicity
Protein Synthesis Inhibitors: TO, toxicity
Structure-Activity Relationship
Tissue Distribution
Trichothecenes: CH, chemistry
Trichothecenes: ME, metabolism
***Trichothecenes: TO, toxicity**

CAS REGISTRY NO.: 51481-10-8 (deoxynivalenol)
CHEMICAL NAME: 0 (Immunosuppressive Agents); 0 (Immunotoxins); 0 (Neurotoxins); 0 (Protein Synthesis Inhibitors); 0 (**Trichothecenes**)

L117 ANSWER 3 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 2003471083 EMBASE
TITLE: Comparative susceptibility of B cells with different lineages to cytotoxicity and apoptosis induction by translational inhibitors.
AUTHOR: Uzarski R.L.; Pestka J.J.
CORPORATE SOURCE: Dr. J.J. Pestka, 234 G.M. Trout Bldg., Dept. of Food Sci. and Hum. Nutr., Michigan State University, East Lansing, MI 48824-1224, United States. pestka@msu.edu
SOURCE: Journal of Toxicology and Environmental Health - Part A, (28 Nov 2003) 66/22 (2105-2118).
Refs: 43
ISSN: 1528-7394 CODEN: JTEHD6
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 022 Human Genetics
026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
The **trichothecene** mycotoxins, Shiga toxins (STs), and ricin are potent translational inhibitors that exert diverse mechanisms of action but all have the capacity to induce death by apoptosis. Germinal centers containing actively dividing B cells are particularly sensitive to protein synthesis inhibition, and, of these, the immature B cell is reportedly most susceptible to apoptosis. The objective of this study was to test the hypothesis that immature and mature B-cell lineages were differentially susceptible to apoptosis and cytotoxicity induction by representative **trichothecene** mycotoxins, ST-1, and ricin, as well as cycloheximide (CHX), a prototypical protein synthesis inhibitor commonly used to study cell signal transduction. WEHI-231 and CH31 cells were used as representatives of phenotypically immature B cells, whereas CH12.LX cells were used to model mature B cells. Resultant data suggest that Type D and Type A **trichothecenes**, ricin, and ST-1 were more potent inducers of apoptosis than CHX, whereas Type B and Type A ***trichothecene*** metabolites were less. CHX and the **trichothecenes** affected immature and mature B cells equally, thus suggesting that toxicity due to these natural toxins was lineage independent. In contrast, mature B cells were more sensitive to ricin- and ST-1-induced cytotoxicity and apoptosis than

immature B cells. Taken together, these results suggest that B cells are targets of a diverse array of naturally occurring translational inhibitors. Upregulation of apoptosis in B lymphocytes may contribute to the impairment of the immune response and other symptoms described following exposure to these toxins.

CONTROLLED TERM: Medical Descriptors:
*apoptosis
*cytotoxicity
*B lymphocyte
*cell lineage
genotoxicity
germinal center
translation regulation
B lymphocyte activation
protein synthesis inhibition
upregulation
immunostimulation
immunopathology
nonhuman
mouse
controlled study
animal cell
article
priority journal
Drug Descriptors:
***trichothecene: TO, drug toxicity**
*mycotoxin: TO, drug toxicity
*Shiga toxin: TO, drug toxicity
*ricin: TO, drug toxicity
*cycloheximide: TO, drug toxicity
protein synthesis inhibitor: TO, drug toxicity
carrier protein: EC, endogenous compound

CAS REGISTRY NO.: (**trichothecene**) **51724-48-2**; (Shiga toxin) 75757-64-1; (ricin) 9009-86-3; (cycloheximide) 642-81-9, 66-81-9; (carrier protein) 80700-39-6

L117 ANSWER 4 OF 16 on STN EMBASE

ACCESSION NUMBER: 2003199451 EMBASE

TITLE: **Trichothecenes** in the environment: Relevance to human health.

AUTHOR: Sudakin D.L.

CORPORATE SOURCE: D.L. Sudakin, Dept. of Environ./Molec. Toxicology, Oregon State University, 333 Weniger, Corvallis, OR 97331-6502, United States. sudakind@ace.orst.edu

SOURCE: Toxicology Letters, (20 Jul 2003) 143/2 (97-107).
Refs: 85
ISSN: 0378-4274 CODEN: TOLED5

COUNTRY: Ireland

DOCUMENT TYPE: Journal; (Short Survey)

FILE SEGMENT: 004 Microbiology
017 Public Health, Social Medicine and Epidemiology
025 Hematology
052 Toxicology

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT:

Trichothecenes are agriculturally important mycotoxins of relevance to human health. Fungi capable of producing **trichothecenes** can be found throughout the world, and include certain species of Fusarium, Myrothecium, and Stachybotrys. The production of mycotoxins by these toxigenic species is determined by genetic factors and the environmental conditions of their growth. The environmental fate of **trichothecenes** may be affected by other microorganisms that can detoxify them. Deoxynivalenol and ***T*** **-2 toxin** are examples of **trichothecenes** that are detectable as natural and unavoidable contaminants of certain agricultural commodities as well as commercial foods. Current estimates of dietary exposure to deoxynivalenol and **T-2 toxin** are below thresholds for adverse effects that have been reported in experimental animal studies, although historical epidemics of human illness have rarely been described in association with consumption of food derived from heavily contaminated grains. The toxicodynamic properties of ***trichothecenes*** include inhibition of protein synthesis and immunomodulatory effects. Very little information is available relating to their toxicokinetics and toxicodynamics in humans. While there is general agreement that the diet represents an important source of human exposure to ***trichothecenes*** , risk assessment from non-dietary routes of exposure is complicated by the limited epidemiological data that are currently available.

CONTROLLED TERM: Medical Descriptors:
*human impact (environment)
*leukopenia: EP, epidemiology
Fusarium
Stachybotrys
genetic toxicology
genetic variability
environmental factor
detoxification
fungal detection
agriculture
food contamination
organismal interaction
epidemic
food intake
toxicokinetics
protein synthesis inhibition
immunomodulation
risk assessment
health
correlation analysis
chemistry
diet
environmental impact assessment
molecular dynamics
seroepidemiology
species endemicity
gastrointestinal disease: CO, complication
gastrointestinal disease: EP, epidemiology
infectious complication: CO, complication
infectious complication: EP, epidemiology
bleeding: CO, complication
bleeding: EP, epidemiology
environmental exposure
nonhuman

short survey
priority journal
Drug Descriptors:
***trichothecene derivative**
mycotoxin
vomitoxin
T 2 toxin
CAS REGISTRY NO.: (vomitoxin) 51481-10-8; (**T 2 toxin**) 21259-20-1

L117 ANSWER 5 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED.
on STN
ACCESSION NUMBER: 2001432339 EMBASE
TITLE: Differential upregulation of TNF-α, IL-6, and IL-8 production by deoxynivalenol (Vomitoxin) and other 8-ketotrichothecenes in a human macrophage model.
AUTHOR: Sugita-Konishi Y.; Pestka J.J.
CORPORATE SOURCE: Dr. J.J. Pestka, 234 G. M. Trout Building, Department of Food Science, Michigan State University, East Lansing, MI 48824-1224, United States. pestka@msu.edu
SOURCE: Journal of Toxicology and Environmental Health - Part A, (21 Dec 2001) 64/8 (619-636).
Refs: 54
ISSN: 1528-7394 CODEN: JTEHD6
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 046 Environmental Health and Pollution Control
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
The effects of deoxynivalenol (DON or vomitoxin) and four closely related 8-ketotrichothecenes on proinflammatory cytokine and chemokine production were evaluated in a clonal human macrophage model. U-937 cells, which represent a human monocytelike histocytic lymphoma, were differentiated into macrophages by preincubation with phorbol 12-myristate 13-acetate (PMA). Differentiated macrophages were incubated with DON in the absence or presence of lipopolysaccharide (LPS), and supernatant was analyzed by enzyme-linked immunosorbent assay (ELISA) for the proinflammatory cytokines interleukin-6 (IL-6) and tumor necrosis factor-α (TNF-α), and for the chemokine interleukin-8 (IL-8). In the absence of LPS, DON at 500 or 1000 ng/ml upregulated TNF-α production as early as 3 h and up to 6 h, whereas 100 to 1000 ng/ml of DON significantly increased production of IL-6 from 3 to 24 h and IL-8 from 6 to 48 h. In cells costimulated with 0.2 μg/ml LPS, DON at 500 or 1000 ng/ml markedly superinduced TNF-α and IL-8 production. Although 100 ng/ml of DON also potentiated LPS-induced IL-6 production, 500 or 1000 ng/ml of the toxin suppressed the LPS-induced IL-6 response. Four other 8-ketotrichothecenes, fusarenon X, nivalenol, 3-acetyl DON, and 15-acetyl DON, were also capable of upregulating or suppressing TNF-α, IL-6, and IL-8 production at concentrations similar to that of DON. In total, the results suggest that DON and other 8-ketotrichothecenes have the potential to both directly induce and superinduce proinflammatory cytokine and chemokine expression in human macrophages, even at toxin concentrations that are cytotoxic.

CONTROLLED TERM: Medical Descriptors:
*receptor upregulation
*macrophage activation

enzyme linked immunosorbent assay
target cell
cell death
concentration response
contamination
toxicity testing
cell viability
immune response
protein synthesis inhibition
human
animal experiment
animal model
controlled study
human cell
article
priority journal
Drug Descriptors:
*tumor necrosis factor alpha
*interleukin 6
*interleukin 8
*vomitoxin
*8 ketotrichothecene
trichothecene
phorbol 12 acetate 13 myristate
cytokine
sesquiterpenoid
unclassified drug

CAS REGISTRY NO.: (interleukin 8) 114308-91-7; (vomitoxin) 51481-10-8; (**trichothecene**) **51724-48-2**; (phorbol 12 acetate 13 myristate) 31365-46-5

L117 ANSWER 6 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

ACCESSION NUMBER: 2002046183 EMBASE
TITLE: Preventive effect of selenium on **T-2 toxin** membrane toxicity.
AUTHOR: Keshavarz S.A.; Memarbashi A.; Balali M.
CORPORATE SOURCE: S.A. Keshavarz, School of Public Health, Institute of Public Health Research, Tehran Univ. of Medical Sciences, P.O.Box 6446-14155, Tehran, Iran (Islamic Republic of)
SOURCE: Advances in Experimental Medicine and Biology, (2001) 500/-(463-466).
Refs: 14
ISSN: 0065-2598 CODEN: AEMBAP
COUNTRY: United States
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 030 Pharmacology
037 Drug Literature Index
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:

T-2 toxin, one or me major toxic ***trichothecene*** mycotoxines, has been shown to cause effects such as inhibition of protein synthesis and impairement of mitochondrial function. The use of **T-2 toxin** as chemical warfare in south east Asia and Iran has been reported. It has been suggested that **T-2** ***2*** **toxin** may mediate its toxic effect via the cell membrane,

but mechanism of action is poorly understood. In cytotoxicity studies, erythrocytes are an excellent model system. In the present study different doses of sodium selenite were injected into male albino mice for 6 days every 48h. Blood samples were taken from experimental and control groups (normal saline). The red cells were counted in isotonic phosphate buffer containing different doses of **T-2 toxin**. The mixture was incubated at 37°(c) for 4h. The results indicate that selenium is able to prevent erythrocyte membrane damage induced by **T-2** ***toxin.*** The protective effect of selenium may be due to its membrane stabilizing properties, although inhibition of lipid peroxidation is likely, too.

CONTROLLED TERM: Medical Descriptors:
*cytotoxicity
*antioxidant activity
protein synthesis inhibition
mitochondrion
chemical warfare
Southeast Asia
Iran
cell membrane
lipid peroxidation
nonhuman
male
mouse
animal experiment
animal model
controlled study
animal cell
conference paper
priority journal
Drug Descriptors:
*selenium: PD, pharmacology
***T 2 toxin**
***trichothecene**
sodium chloride

CAS REGISTRY NO.: (selenium) 7782-49-2; (**T 2 toxin**) 21259-20-1; (**trichothecene**) **51724-48-2**; (sodium chloride) 7647-14-5

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ACCESSION NUMBER: 2001059260 EMBASE

TITLE: Isolation, and biological properties of a new cell cycle inhibitor, curvularol, isolated from Curvularia sp. RK97-F166.

AUTHOR: Honda Y.; Ueki M.; Okada G.; Onose R.; Usami R.; Horikoshi K.; Osada H.

CORPORATE SOURCE: H. Osada, RIKEN Institute, 2-1 Hirosawa, Wako-shi, Saitama 351-0198, Japan. hisyo@postman.riken.go.jp

SOURCE: Journal of Antibiotics, (2001) 54/1 (10-16).
Refs: 17
ISSN: 0021-8820 CODEN: JANTAJ

COUNTRY: Japan

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology
016 Cancer
030 Pharmacology

037 Drug Literature Index

LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT:
A new cell growth inhibitor, curvularol, was isolated from the fermentation broth of Curvularia sp. RK97-F166. Curvularol showed no antibacterial activity, and very weak antifungal activity. However, curvularol inhibited the cell cycle progression of normal rat kidney (NRK) cells in G(1) phase at 150 ng/ml. Curvularol induced the morphological reversion of src(ts)-transformed NRK cells at 100 ng/ml, and inhibited protein synthesis same as cycloheximide.

CONTROLLED TERM: Medical Descriptors:
*Curvularia
drug isolation
fermentation
antibacterial activity
antifungal activity
cell cycle G1 phase
kidney cell
virus cell transformation
Rous sarcoma oncovirus
virus mutant
cell structure
concentration response
protein synthesis inhibition
cytotoxicity
minimum inhibitory concentration
drug purification
drug structure
IC 50
human
nonhuman
rat
controlled study
human cell
animal cell
article
priority journal
Drug Descriptors:
*curvularol: AN, drug analysis
*curvularol: CM, drug comparison
*curvularol: DV, drug development
*curvularol: PD, pharmacology
protein synthesis inhibitor: AN, drug analysis
protein synthesis inhibitor: DV, drug development
protein synthesis inhibitor: PD, pharmacology
cycloheximide: CM, drug comparison
cycloheximide: PD, pharmacology
nivalenol: AN, drug analysis
nivalenol: CM, drug comparison
nivalenol: PD, pharmacology
verrucarol derivative: AN, drug analysis
verrucarol derivative: CM, drug comparison
verrucarol derivative: PD, pharmacology
t 2 toxin tetraol: AN, drug analysis
t 2 toxin tetraol: CM, drug comparison
t 2 toxin tetraol: PD, pharmacology
trichothecene derivative: AN, drug analysis

trichothecene derivative: CM, drug comparison
trichothecene derivative: PD, pharmacology
daunorubicin: CM, drug comparison
daunorubicin: PD, pharmacology
dactinomycin: CM, drug comparison
dactinomycin: PD, pharmacology
unclassified drug

CAS REGISTRY NO.: (cycloheximide) 642-81-9, 66-81-9; (nivalenol) 23282-20-4; (**t 2 toxin** tetraol) 34114-99-3; (daunorubicin) 12707-28-7, 20830-81-3, 23541-50-6; (dactinomycin) 1402-38-6, 1402-58-0, 50-76-0

L117 ANSWER 8 OF 16 EMBASE
on STN

ACCESSION NUMBER: 2001034500 EMBASE
TITLE: Mycotoxins and toxigenic fungi.
AUTHOR: Pitt J.I.; Basilico J.C.; Abarca M.L.; Lopez C.
CORPORATE SOURCE: Dr. J.I. Pitt, Food Science Australia, P.O. Box 52, North Ryde, NSW 2113, Australia. John.Pitt@foodscience.afisc.csiro.au
SOURCE: Medical Mycology, (2000) 38/SUPPL. 1 (41-46).
Refs: 50
ISSN: 1369-3786 CODEN: MEMYFR
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Conference Article
FILE SEGMENT: 004 Microbiology
052 Toxicology
005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery
016 Cancer
028 Urology and Nephrology
048 Gastroenterology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
Mycotoxins and the fungi that produce them are of increasing importance as causes of human illness, but the diseases produced remain poorly understood at the clinical level. This paper explores four aspects: the increase of interest in ochratoxin A, factors affecting mycotoxin production, toxicology of the major mycotoxins, and the identification of Penicillium species which cause food spoilage and are important in indoor air.

CONTROLLED TERM: Medical Descriptors:
human
nonhuman
toxicology
Penicillium
toxicokinetics
protein synthesis
protein analysis
fungus identification
food spoilage
Fusarium
Aspergillus
carcinogenicity
food contamination
food intake
protein synthesis inhibition

gastrointestinal symptom: ET, etiology
central nervous system disease: ET, etiology
immune response
sexual dysfunction: ET, etiology
isolation procedure
air pollutant
kidney disease: ET, etiology
conference paper
Drug Descriptors:
*mycotoxin: EC, endogenous compound
*mycotoxin: TO, drug toxicity
*ochratoxin: EC, endogenous compound
*ochratoxin: TO, drug toxicity
aflatoxin: EC, endogenous compound
aflatoxin: TO, drug toxicity
vomitoxin: EC, endogenous compound
vomitoxin: TO, drug toxicity
nivalenol: EC, endogenous compound
nivalenol: TO, drug toxicity
zearalenone: EC, endogenous compound
zearalenone: TO, drug toxicity
fumonisin B1: EC, endogenous compound
fumonisin B1: TO, drug toxicity
aflatoxin B1: EC, endogenous compound
aflatoxin B1: TO, drug toxicity
trichothecene derivative: EC, endogenous compound
trichothecene derivative: TO, drug toxicity

CAS REGISTRY NO.: (ochratoxin) 303-47-9, 37203-43-3; (aflatoxin) 1402-68-2; (vomitoxin) 51481-10-8; (nivalenol) 23282-20-4; (zearalenone) 17924-92-4; (fumonisin B1) 116355-83-0; (aflatoxin B1) 1162-65-8

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ACCESSION NUMBER: 1999172999 EMBASE

TITLE: **Trichothecene** mycotoxins trigger a ribotoxic stress response that activates c-Jun N-terminal kinase and p38 mitogen-activated protein kinase and induces apoptosis.

AUTHOR: Shifrin V.I.; Anderson P.

CORPORATE SOURCE: P. Anderson, Division of Rheumatology, Brigham and Women's Hospital, Boston, MA 02115, United States. panderson@rics.bwh.harvard.edu

SOURCE: Journal of Biological Chemistry, (14 May 1999) 274/20 (13985-13992).
Refs: 57
ISSN: 0021-9258 CODEN: JBCHA3

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 005 General Pathology and Pathological Anatomy
029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT:

The **trichothecene** family of mycotoxins inhibit protein synthesis by binding to the ribosomal peptidyltransferase site. Inhibitors of the peptidyltransferase reaction (e.g. anisomycin) can trigger a ribotoxic stress

response that activates c-Jun N-terminal kinase (JNK)/p38 mitogen-activated protein kinases, components of a signaling cascade that regulates cell survival in response to stress. We have found that selected **trichothecenes** strongly activate JNK/p38 kinases and induce rapid apoptosis in Jurkat T cells. Although the ability of individual **trichothecenes** to inhibit protein synthesis and activate JNK/p38 kinases are dissociable, both effects contribute to the induction of apoptosis. Among **trichothecenes** that strongly activate JNK/p38 kinases, induction of apoptosis increases linearly with inhibition of protein synthesis. Among **trichothecenes** that strongly inhibit protein synthesis, induction of apoptosis increases linearly with activation of JNK/p38 kinases. **Trichothecenes** that inhibit protein synthesis without activating JNK/p38 kinases inhibit the function (i.e. activation of JNK/p38 kinases and induction of apoptosis) of apoptotic ***trichothecenes*** and anisomycin, Harringtonine, a structurally unrelated protein synthesis inhibitor that competes with **trichothecenes** (and anisomycin) for ribosome binding, also inhibits the activation of JNK/p38 kinases and induction of apoptosis by **trichothecenes** and anisomycin. Taken together, these results implicate the peptidyltransferase site as a regulator of both JNK/p38 kinase activation and apoptosis.

CONTROLLED TERM: Medical Descriptors:
*enzyme activation
*apoptosis
enzyme activity
signal transduction
leukemia cell line
protein synthesis inhibition
drug mechanism
drug protein binding
human
human cell
article
priority journal
Drug Descriptors:
***trichothecene: PD, pharmacology**
*mycotoxin: PD, pharmacology
*stress activated protein kinase: EC, endogenous compound
*mitogen activated protein kinase: EC, endogenous compound
anisomycin
harringtonine

CAS REGISTRY NO.: (**trichothecene**) **51724-48-2;** (stress activated protein kinase) 155215-87-5; (mitogen activated protein kinase) 142243-02-5; (anisomycin) 22862-76-6; (harringtonine) 26833-85-2

COMPANY NAME: Sigma

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ACCESSION NUMBER: 1999023046 EMBASE

TITLE: Highly sensitive protein translation assay for **trichothecene** toxicity in airborne particulates: Comparison with cytotoxicity assays.

AUTHOR: Yike I.; Allan T.; Sorenson W.G.; Dearborn D.G.

CORPORATE SOURCE: D.G. Dearborn, Case Western Reserve University, Department of Pediatrics, Division of Pediatric Pulmonology, 11100 Euclid Ave., Cleveland, OH 44106-6006, United States. dxd9@po.cwru.edu

SOURCE: Applied and Environmental Microbiology, (1999) 65/1

(88-94).
Refs: 30
ISSN: 0099-2240 CODEN: AEMIDF
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
046 Environmental Health and Pollution Control
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT:
Screening assays for environmental mycotoxins in bulk samples currently use cytotoxicity in cell cultures, but their application to air particulate samples often lacks sensitivity and specificity for fungal spores. An assay based on inhibition of protein synthesis using translation of firefly luciferase in a rabbit reticulocyte system has been developed for the detection of ***trichothecene*** mycotoxins found in the spores of toxigenic fungi. Ethanol extracts of air particulates trapped on polycarbonate filters are ultrafiltered and applied at several dilutions to a translation reaction mixture. The activity of translated luciferase is measured directly in a luminometer, eliminating the need for radioisotopes and time-consuming sample processing. Parallel standard curves using a commercially available ***trichothecene*** provide for expression of the results in **T-2** ***toxin*** equivalents per cubic meter of air. The assay can be completed in 2 h and is readily applicable to multiple samples. Comparison to the 3-(4,5-dimethylthiazol-2- yl)-2,5-diphenyltetrazolium bromide cytotoxicity assay indicates a 400-fold increase in sensitivity of **trichothecene** detection in addition to a much higher specificity for these toxins. Initial field testing indicates a strong correlation between the measured level of toxicity and the presence of toxigenic fungi detected with microbiological methods. In conclusion, this luciferase translation assay offers a rapid and highly sensitive and specific method for quantitative detection of ***trichothecene*** mycotoxin activity in air particulate samples.

CONTROLLED TERM: Medical Descriptors:
*RNA translation
*toxicity testing
*air pollution
particulate matter
cytotoxicity
fungus spore
protein synthesis inhibition
reticulocyte
rabbit
quantitative assay
air sampling
nonhuman
controlled study
animal cell
article
Drug Descriptors:
***trichothecene: TO, drug toxicity**
*mycotoxin: TO, drug toxicity
luciferase
alcohol
3 (4,5 dimethyl 2 thiazolyl) 2,5 diphenyltetrazolium bromide
CAS REGISTRY NO.: **(trichothecene) 51724-48-2;**

(luciferase) 61970-00-1, 9014-00-0; (alcohol) 64-17-5; (3 (4,5 dimethyl 2 thiazolyl) 2,5 diphenyltetrazolium bromide) 298-93-1

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ACCESSION NUMBER: 1998096704 EMBASE

TITLE: **Trichothecene** 3-O-acetyltransferase protects both the producing organism and transformed yeast from related mycotoxins. Cloning and characterization of Tri101.

AUTHOR: Kimura M.; Kaneko I.; Komiyama M.; Takatsuki A.; Koshino H.; Yoneyama K.; Yamaguchi I.

CORPORATE SOURCE: M. Kimura, Microbial Toxicology Laboratory, Institute of Physical/Chemical Res., 2-1 Hirosawa, Wako-shi, Saitama 351-01, Japan

SOURCE: Journal of Biological Chemistry, (1998) 273/3 (1654-1661). Refs: 40
ISSN: 0021-9258 CODEN: JBCHA3

COUNTRY: United States

DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 004 Microbiology

LANGUAGE: English

SUMMARY LANGUAGE: English

ABSTRACT:

Trichothecene mycotoxins such as deoxynivalenol, 4,15-diacetoxyscirpenol, and **T-2 toxin**, are potent protein synthesis inhibitors for eukaryotic organisms. The 3-O-acetyl derivatives of these toxins were shown to reduce their in vitro activity significantly as assessed by assays using a rabbit reticulocyte translation system. The results suggested that the introduction of an O-acetyl group at the C-3 position in the biosynthetic pathway works as a resistance mechanism for Fusarium species that produce t- type **trichothecenes** (***trichothecenes*** synthesized via the precursor trichotriol). A gene responsible for the 3-O-acetylation reaction, Tri101, has been successfully cloned from a Fusarium graminearum cDNA library that was designed to be expressed in Schizosaccharomyces pombe. Fission yeast transformants were selected for their ability to grow in the presence of **T-2** ***toxin*** , and this strategy allowed isolation of 25 resistant clones, all of which contained a cDNA for Tri101. This is the first drug-inactivating O-acetyltransferase gene derived from antibiotic-producing organisms. The open reading frame of Tri101 codes for a polypeptide of 451 amino acid residues, which shows no similarity to any other proteins reported so far. TRI101 from recombinant Escherichia coli catalyzes O-acetylation of the ***trichothecene*** ring specifically at the C-3 position in an acetyl-CoA-dependent manner. By using the Tri101 cDNA as a probe, two least overlapping cosmid clones that cover a region of 70 kilobase pairs have been isolated from the genome of F. graminearum. Other **trichothecene** biosynthetic genes, Tri4, Tri5, and Tri6, were not clustered in the region covered by these cosmid clones. These new cosmid clones are considered to be located in other parts of the large biosynthetic gene cluster and might be useful for the study of **trichothecene** biosynthesis.

CONTROLLED TERM: Medical Descriptors:
*molecular cloning
*fusarium
*schizosaccharomyces pombe
dna probe
protein synthesis inhibition

escherichia coli
cosmid
toxin structure
nonhuman
article
priority journal
Drug Descriptors:
*mycotoxin
***trichothecene**
*acyltransferase
vomitoxin
t 2 toxin
diacetoxyscirpenol
CAS REGISTRY NO.: (**trichothecene**) **51724-48-2;**
(acyltransferase) 9012-30-0, 9054-54-0; (vomitoxin)
51481-10-8; (**t 2 toxin**)
21259-20-1; (diacetoxyscirpenol) 2270-40-8

L117 ANSWER 12 OF 16 EMBASE
on STN
ACCESSION NUMBER: 1998186041 EMBASE
TITLE: Toxic effects of deoxynivalenol on ribosomes and tissues of the spring wheat cultivars Frontana and Casavant.
AUTHOR: Miller J.D.; Ewen M.A.
CORPORATE SOURCE: J.D. Miller, Department of Chemistry, Carleton University, Ottawa, Ont. K15 5B6, Canada. jdmiller@ccs.carleton.ca
SOURCE: Natural Toxins, (1997) 5/6 (234-237).
Refs: 21
ISSN: 1056-9014 CODEN: NATOEE
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
The toxic effects of the Fusarium graminearum **trichothecene** toxin deoxynivalenol were determined on ribosomes and leaf tissues of the fusarium head blight-resistant spring wheat cultivar Frontana and the susceptible spring wheat cultivar Casavant. The use of a poly-U-directed 14C-phenylalanine and deoxynivalenol ribosome-binding assays provided evidence of resistance to the protein-synthesis inhibition effects of deoxynivalenol in the head blight-resistant cultivar Frontana. This is probably due to the existence of a mutation in the peptidyl transferase. This cultivar also exhibited resistance to the membrane-damaging properties of this toxin compared to the other cultivar. This report summarizes the evidence for various kinds of ' ***trichothecene*** tolerance' mechanisms in fusarium head blight-resistant wheat genotypes.

CONTROLLED TERM: Medical Descriptors
*ribosome
wheat
cultivar
fusarium
protein synthesis inhibition
gene mutation
membrane damage
nonhuman

article
Drug Descriptors:
*vomitoxin: TO, drug toxicity
phenylalanine
vegetable protein: EC, endogenous compound
peptidyltransferase: EC, endogenous compound
trichothecene
CAS REGISTRY NO.: (vomitoxin) 51481-10-8; (phenylalanine) 3617-44-5, 63-91-2; (peptidyltransferase) 9059-29-4; (**trichothecene**) **51724-48-2**

L117 ANSWER 13 OF 16 EMBASE COPYRIGHT 2004 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
ACCESSION NUMBER: 95206038 EMBASE
DOCUMENT NUMBER: 1995206038
TITLE: Induction of cytokine mRNAs in mice after oral exposure to the **trichothecene** vomitoxin (deoxynivalenol): Relationship to toxin distribution and protein synthesis inhibition.
AUTHOR: Azcona-Olivera J.I.; Ouyang Y.; Murtha J.; Chu F.S.; Pestka J.J.
CORPORATE SOURCE: Dept. Food Science/Human Nutrition, Michigan State University,East Lansing, MI 48824, United States
SOURCE: Toxicology and Applied Pharmacology, (1995) 133/1 (109-120).
ISSN: 0041-008X CODEN: TXAPA
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
The effects of oral exposure to 0, 5, and 25 mg/kg body wt vomitoxin (VT) on cytokine mRNA levels in spleen, Peyer's patches (PP), liver, kidney, and small intestine were evaluated in B6C3F1 mice at 2 and 4 hr postexposure using RT-PCR in conjunction with Southern hybridization analysis. The abundance of mRNAs for several cytokines was increased in VT-exposed mice with maximal effects occurring in the 25 mg/kg group at 2 hr. Specifically, IL-1β and IL-6 mRNA levels increased in spleen and PP following exposure to VT. TNF-α mRNA levels were markedly elevated in spleen and liver of VT-exposed mice. TGF-β mRNA was increased in treatment kidneys and to a lesser extent in liver and small intestine. IFN-γ mRNAs were elevated according to the rank order: spleen > PP > small intestine > liver > kidney, whereas IL-2 mRNAs were increased primarily in spleen and PP. VT had little effect on abundance of mRNAs for the TH2 cytokines, IL-4 and IL-5, or the housekeeping gene, hypoxanthine guanine ribosyl transferase. In order to relate cytokine mRNA abundance to toxin distribution, mice were administered 5 and 25 mg/kg VT body wt containing [3H]VT and tissue levels were monitored over time. Maximum VT molar equivalents for both doses were found at 30 min or 1 hr in all tissues with a rapid clearance following two-compartment kinetics over 24 hr. When effects of oral VT exposure on in vivo protein synthesis at 3 hr postexposure was measured using [14C]leucine uptake, it was found to be inhibited by ≥20 and ≥50% in tissues of mice receiving 5 and 25 mg/kg VT, respectively. While recovery was observed in tissues of the 5 mg/kg group at 6 hr, protein synthesis was still significantly inhibited ≥70%) at 9 hr for all tissues in the 25 mg/kg group. The results suggest that acute oral VT

exposure resulted in the transient elevation of mRNAs for proinflammatory and TH1 cytokines. These effects occurred immediately after peak VT accumulation and concurrently with marked in vivo protein synthesis inhibition.

CONTROLLED TERM: Medical Descriptors:
***protein synthesis inhibition**
*toxicokinetics
animal experiment
animal model
article
controlled study
kidney
liver
macrophage activation
male
mouse
nonhuman
small intestine
spleen
Drug Descriptors:
*cytokine: EC, endogenous compound
***trichothecene: TO, drug toxicity**
*vomitoxin: TO, drug toxicity
gamma interferon: EC, endogenous compound
interleukin 1beta: EC, endogenous compound
interleukin 4: EC, endogenous compound
interleukin 5: EC, endogenous compound
interleukin 6: EC, endogenous compound
tumor necrosis factor alpha: EC, endogenous compound
CAS REGISTRY NO.: (**trichothecene**) **51724-48-2**; (vomitoxin) 51481-10-8; (gamma interferon) 82115-62-6

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on STN
ACCESSION NUMBER: 93150395 EMBASE
DOCUMENT NUMBER: 1993150395
TITLE: Topical application of **T-2 toxin** inhibits the contact hypersensitivity response in BALB/c mice.
AUTHOR: Blaylock B.L.; Kouchi Y.; Comment C.E.; Pollock P.L.; Luster M.I.
CORPORATE SOURCE: Environmental Immunology Section, NIEHS, P.O. Box 12233,Research Triangle Park, NC 27709, United States
SOURCE: Journal of Immunology, (1993) 150/11 (5135-5143). ISSN: 0022-1767 CODEN: JOIMA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
T-2 toxin, a **trichothecene** mycotoxin, has previously been shown to alter immune functions and promote skin tumors. We demonstrate that topically applied **T-2 toxin** reduces the ear swelling response to oxazolone challenge in BALB/c mice. For this reduction in ear swelling to occur, toxin application must be at, or within, 1 h after challenge. Dose-response studies showed a 44% reduction in ear swelling with 30 ng of **T-2 toxin** as compared

with a similar reduction with 300 ng of dexamethasone. **T-2** ***toxin*** did not affect Ag transport from the challenge site to the draining lymph nodes as measured by FITC transport. However, **T-** ***2*** **toxin** significantly reduced both MHC class II (Ia) expression and Ag presentation at the same concentrations. Because **T-** ***2*** **toxin,** a known protein synthesis inhibitor, was found to inhibit protein synthesis in epidermal cell cultures as measured by [3H]leucine incorporation, cycloheximide was also examined. Cycloheximide reduced both oxazolone-induced ear swelling and Ag presentation in a similar manner to ***T*** **- 2 toxin.** One mechanism of action for **T -2 toxin** in reducing the contact hypersensitivity response is via inhibition of protein synthesis and effective Ag presentation by epidermal Langerhans cells. This may involve alterations in Ia Ag expression, although a role for class II in the induction phase of the contact hypersensitivity response has not been established definitively.

CONTROLLED TERM: Medical Descriptors:
*contact allergy
*immune response
animal experiment
antigen expression
article
dose response
edema
immunomodulation
langerhans cell
male
mouse
nonhuman
priority journal
protein synthesis inhibition
provocation test
Drug Descriptors:
***t 2 toxin**
cycloheximide
major histocompatibility antigen class 2: EC, endogenous compound
oxazolone

CAS REGISTRY NO.: (**t 2 toxin**) 21259-20-1;
(cycloheximide) 642-81-9, 66-81-9

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ACCESSION NUMBER: 93318701 EMBASE
DOCUMENT NUMBER: 1993318701
TITLE: Effect of emetine on **T-2 toxin** -induced inhibition of protein synthesis in mammalian cells.
AUTHOR: Leatherman D.L.; Middlebrook J.L.
CORPORATE SOURCE: Toxinology Division, U.S. Army Medical Research Institute,Frederick, MD 21701-5011, United States
SOURCE: Journal of Pharmacology and Experimental Therapeutics, (1993) 266/2 (741-748).
ISSN: 0022-3565 CODEN: JPETAB
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 030 Pharmacology
037 Drug Literature Index

052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
Chinese hamster ovary cells were used to examine the effect of emetine upon the toxicity of **T-2 toxin** and several related
trichothecene inhibitors of polypeptide synthesis. Emetine inhibited protein synthesis and **T-2 toxin**- cell association
in a concentration-dependent manner. The dose-response curves for these two effects were nearly identical. Over a narrow concentration range (0.3-3.0 μg/ml), emetine's inhibition of protein synthesis was partially reversible, whereas its inhibition of toxin-cell association was maintained for extended periods. This sustained inhibition of toxin-cell association, resulted in 'desensitized' cells with reduced sensitivity to the inhibitory effects of
T **-2 toxin** on protein synthesis. Similar results
were obtained when emetine-preincubated cells were challenged with diacetoxyscirpenol, verrucarin A and roridin A. In contrast, there were no measurable effects of emetine upon the response of the cells to the less potent
trichothecenes , deoxynivalenol, T-2 tetraol and verrucarol. In addition to emetine, several other inhibitors of polypeptide synthesis were examined for their effects on **T-2 toxin**-cell association and
sensitivity to **T-2 toxin**. Of these, only
cycloheximide inhibited toxin-cell association. Unlike emetine, sustained protection against the effects of **T-2 toxin** was
not observed with cycloheximide.

CONTROLLED TERM: Medical Descriptors:
***protein synthesis inhibition**
animal cell
article
cho cell
controlled study
cytotoxicity
dose response
nonhuman
priority journal
protein synthesis
Drug Descriptors:
*emetine: CM, drug comparison
*emetine: PD, pharmacology
***t 2 toxin: TO, drug toxicity**
cycloheximide: CM, drug comparison
cycloheximide: PD, pharmacology
diacetoxyscirpenol: TO, drug toxicity
roridin a: TO, drug toxicity
verrucarin a: TO, drug toxicity
verrucarol derivative: TO, drug toxicity
vomitoxin: TO, drug toxicity
CAS REGISTRY NO.: (emetine) 316-42-7, 483-18-1; (**t 2 toxin**) 21259-20-1; (cycloheximide) 642-81-9, 66-81-9; (diacetoxyscirpenol) 2270-40-8; (roridin a) 14729-29-4; (verrucarin a) 3148-09-2; (vomitoxin) 51481-10-8
COMPANY NAME: Sigma (United States)

L117 ANSWER 16 OF 16 EMBASE
on STN
ACCESSION NUMBER: 92301828 EMBASE

DOCUMENT NUMBER: 1992301828
TITLE: The toxicity of macrocyclic **trichothecenes** administered directly into the rat brain.
AUTHOR: Bergmann F.; Yagen B.; Jarvis B.B.
CORPORATE SOURCE: Department of Pharmacology, School of Pharmacy, Hebrew Univ.-Hadassah Medical School,Jerusalem 19010, Israel
SOURCE: Toxicon, (1992) 30/10 (1291-1294).
ISSN: 0041-0101 CODEN: TOXIA6
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 008 Neurology and Neurosurgery
052 Toxicology
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT:
The tested macrocyclic **trichothecenes** are produced by Myrothecium fungi and by the plant Baccharis megapotamica. The toxicity of five macrocyclic ***trichothecenes*** has been measured by intracerebral and subcutaneous injection into rats. It is assumed that the toxic effects are based on inhibition of protein synthesis. Intoxication of rats by these compounds finds expression in slowly progressing respiratory depression and paralysis of skeletal muscles. The macrocyclics are derived from verrucarol, which lacks ring D and exhibits only low toxicity. The high toxicity of the macrocyclics, established by intracerebral and subcutaneous applications, may thus be attributed to the presence of the large ring D.

CONTROLLED TERM: Medical Descriptors:
***protein synthesis inhibition**
animal experiment
article
ld 50
nonhuman
paralysis
rat
respiration depression
Drug Descriptors:
***trichothecene: TO, drug toxicity**
CAS REGISTRY NO.: **(trichothecene) 51724-48-2**

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